

**Factors That Predict Employee Retention In  
Traditional Pulp and Paper Mills Facing Labour Shortages  
Using a Statistical Model**

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## **Abstract**

This empirical study examines factors, which affect employee attrition in the British Columbia pulp and paper mill industry. Although no new pulp mills have been built in BC for decades, they are complex technical facilities that require a highly skilled work force. In the past ten years 50% of those jobs have been lost in BC. New workers are less likely to consider joining an industry that is perceived to be in decline. In fact, pulp mills are experiencing high turnover and finding recruitment of skilled labour to be difficult.

Forests are the most renewable resource on the planet and Canada has over 402,100,000 hectares of forest (41%). In British Columbia, there are almost 100,000 direct forest jobs and twice as many support jobs. Forestry contributes 20% of BC's gross domestic product, GDP, and pulp and paper wages are in the top quartile. The economic importance of forestry and pulp mills highlights the need to determine the factors which will keep skilled labour interested and companies viable.

Existing research from work motivation studies and Statistics Canada employment data is used. Independent theories posed by Herzberg, Price, Hackman, Oldham, Locke, Rynes and others are used for definitions and analysis. A survey was conducted using core questions based on existing job satisfaction research. The survey results provide rankings and correlations of employee intention to remain factors within a British Columbia pulp mill.

The results provide priorities for developing Human Resources (HR) strategy focused on the recruitment of new employees and the retention of existing employees.

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## **Chapter One : Introduction**

A reduced workforce is coming. Retiring baby boomers are creating a demographic transformation, which is compounded by a smaller replacement generation. The declining labour pool, combined with high demand for skills is making it difficult for mature industries to maintain adequate labour numbers.

Building and retaining human capital is a corner stone of a profitable business. To be successful firms need to both hire and keep good people. The new labour market provides access and opportunity for skilled people to choose the employer, instead of the employer choosing the employee. To recruit and retain qualified people is a particular challenge for declining industries.

The pulp and paper manufacturing industry is in decline in Canada. Thousands of forestry jobs have been lost in BC, while other manufacturing sectors have seen dramatic increases. Also declining are pulp mill wages. They are well above average, but have not kept pace with inflation and are now behind oil and gas jobs. Traditionally, mills have relied on high wages and job security to keep workers. However, today's workers are moving to the technology sector, health care and booming construction sectors. These sectors and emerging industries, offer good compensation packages and better hopes for job security. Compounding the issue are new employee attitudes. Generation X appears to have a mercenary attitude toward employers. Traditional incentives, such as overtime and hopes of long-term employment, have little effect on retention.

Skilled labour and professionals are now in high demand. This enables individuals to set their own terms. If they find another job opportunity, they feel little loyalty or responsibility. They may abandon an employer in the middle of a project.

Motivation Theory-X was the basis for employee relations within traditional pulp and paper companies. Employees and management established strict rules because they did not trust each other. The collective agreements were built around these rules and have become part

of the culture. Change can be difficult and face resistance at many levels. Regardless of the dynamic Human Resources (HR) changes in other work places, often the work environments at mills perpetuate the alpha-male traditions of the 1950's.

Human Resources Management (HRM) is a multifaceted discipline. An organization needs a straightforward, reliable approach to identify its HR strengths and opportunities. There is a plethora of existing research and statistics on employee retention and job satisfaction.

Using employee satisfaction and retention studies, a set of survey questions was developed. The survey was deployed at several firms and most of the responses came from a northern BC pulp and paper mill. The results provide a ranking of retention factors.

The results provide a snap shot of employee attitudes toward their work, their companies and their thoughts toward employee retention. New HR strategies should be developed using the data and ranking. Analysis of the results provides an opportunity for creation of an employee retention model for pulp and paper mills.

Through use of such a model and HR strategies focused on identified retention issues, a mill has an opportunity to create an employee preservation plan that deals with site-specific worker concerns. Ultimately, the time and effort invested to assess and retain employees is returned through productivity savings.

## **Chapter Two : Literature Review**

Canada is the world's second largest producer and the world largest exporter of pulp and paper (Minnes 2008). Eighty percent of Canadian production is exported and must compete against products from the United States, Europe, Asia and South America. To remain competitive mills must be highly efficient. Over 85% of the costs are from wood, energy, transportation and personnel (Horner 2006). A structured business model addresses the first three factors, but the management of human capital requires a very different approach.

Over the past decades, the British Columbia pulp and paper industry has seen the number of jobs dramatically decline (Figure 1). The remaining mills are under pressure to be more competitive, and increase production per employee. Often the ratio is improved by increasing total production, or cutting the number of employees. This latter method can produce quick financial results, but must be carefully planned to be part of a long term solution. Large capital projects and process changes within mills undergo intense assessments before proceeding. A similar process is required when evaluating changes to human capital.

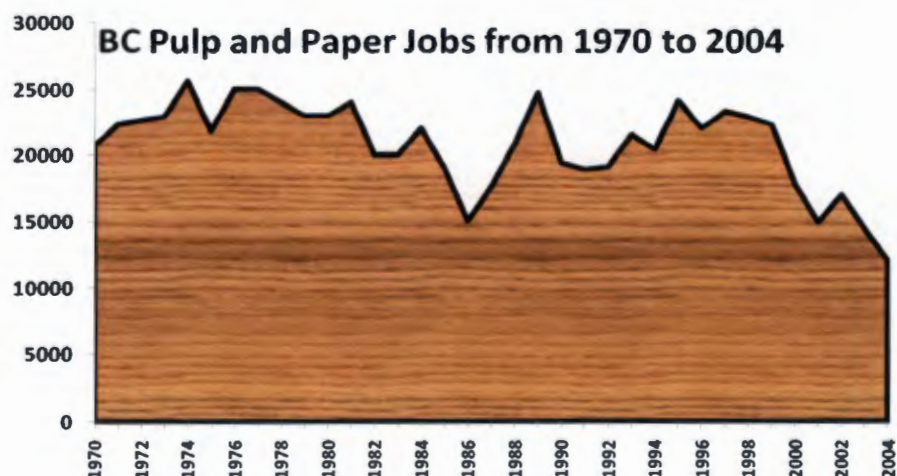


Figure 1: Decline in BC Pulp and Paper Jobs, BC Forests



The economy of British Columbia and the world is changing. BC's history is rooted in the rich resources that have been and continue to be exported outside of the province. The pulp and paper sector has sales of \$6.9 billion per year, is a major employer and one of the largest users of high technology. BC's resource sectors, the fisheries, mines and forests, have provided many jobs in the past but this has changed. Today 4 out of 5 jobs are in the service sector. Of the remaining goods and manufacturing jobs only 9% are from natural resources (BC Stats 2007). That number continues to decline. The forecast is for further reductions in the contribution of resources to provincial employment and GDP. The government and industry forums are describing a movement away from industry and toward services. Young workers who access the Ministry of Advanced Education or seasoned workers accessing the Ministry of Employment will find a spotlight on the new economy. Work in pulp mills is considered part of the old economy.

Today's workers have easy access to information about job possibilities, comparisons and recruitment that was never available to previous generations. The internet has numerous online recruiters and employment services. Posting a resume is now as easy as sending an e-mail. While at work, new job opportunities can be surfed compared and resumes sent.

The pressure is on industry to keep good employees, because new ones will be harder to attract. Jobs with strong skill requirements have higher than average vacancy rates and this effect is growing with the demographic shift (Morissette 2001). Although studies argue the extent and impact of employee turnover (Dalton 1981), the loss of a skilled and knowledgeable employees in a complex industry costs the firm 150% of the salary (Daniel 1997). Replacing a millwright who has knowledge and experience in a mill and is making \$80,000 per year, actually costs \$200,000. This includes lost productivity, recruitment, training, and other factors. It does not include the net effect on the organizational memory or morale. Retaining the employee also means retaining the replacement costs.

## Research Question

There is nothing *a priori* about employee retention. Job satisfaction and personal happiness are causes for employees to quit their jobs. These factors are as unique as the workers, supervisors and companies involved. British Columbia's pulp and paper mills are older facilities with traditional labour practices. There are established pay rates throughout these mills and therefore the job satisfaction must be achieved through intrinsic factors rather than extrinsic factors such as compensation and benefits. A critical factor in HR strategies is knowing the employee perceptions. The human condition is a complex study and there are many causes. Identifying and ranking those retention factors requires an answer to the question:

***What factors predict employee intention to remain in a pulp and paper mill?***

Table 1: Occupational Skills Group (Statistics Canada)

	1991	2001	Growth 1991-2001
	Number of persons		%
	Canada		
All occupations	14,220,230	15,576,560	9.5
University	1,904,445	2,530,900	32.9
College	3,172,000	3,369,515	6.2
Apprenticeship training	1,343,175	1,292,605	-3.8
Secondary or less	6,417,200	6,762,645	5.4
Managers	1,383,410	1,620,900	17.2

	1991	2001	Growth 1991-2001
	Number of persons		%
British Columbia			
All occupations	1,721,685	2,014,600	17
University	215,260	322,565	49.8
College	382,225	442,205	15.7
Apprenticeship training	171,910	162,125	-5.7
Secondary or less	780,080	869,260	11.4
Managers	172,215	218,445	26.8

## Canada's New Job Market

Labour force projections indicate a continuing decline in labour force participation until 2020 (Martel 2006). The rate of boomer retirements will not be offset by an increase in either immigration or the birth rate. At the same time, older workers will continue to work past traditional retirement targets. These demographic changes will create options for existing workers and increase the expectations of their productivity. They will be expected to produce more, but fewer will share the rewards and therefore their compensation is likely to increase. Companies will find themselves competing for workers and workers will find a buyer's market. Companies will be under increasing pressure to retain existing employees because new employees will be very difficult and expensive to find.

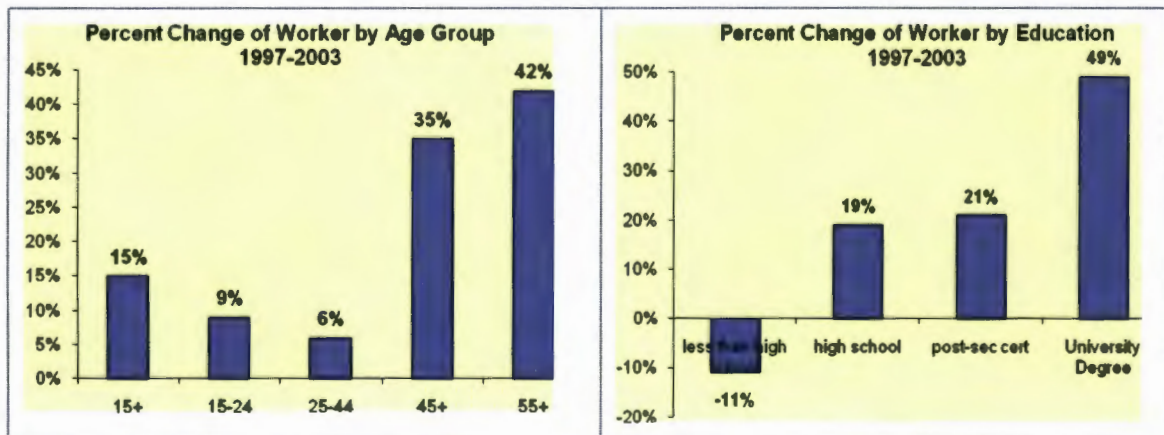


Figure 2: Worker Age Groups

Figure 3: Change in Worker Education

The pulp and paper industry is highly complex and requires a trained, educated, skilled workforce (Horner 2005). Mills require trades people, engineers, purchasing agents, IT support, systems specialists, accountants, paper makers, human resource specialists and others. Although there are few requirements for bachelor degrees, the complexity of a facility requires workers with unique skills. Traditionally, entry-level workers would be hired as unskilled labour. Over time and through a seniority system they gain training and experience, or apprenticeships, and move up through the organization. The picture of



employee skills for Canada and BC has changed dramatically in the last 10 years (Table 1). There are fewer skilled trades and more university graduates and managers, especially in BC (Figure 2).

For decades, companies were able to rely on loyal and long serving baby boomers. The boomers learned the value of a career and the rewards of a hard work ethic. They achieved a better standard of living than their parents did. Today they occupy senior management positions. Companies rewarded them with the highest compensation and pension benefits of all time. They produced high corporate returns, shopped a lot, bought fancy houses, new cars and invested in their future retirements. HR policies were traditional hierarchies because the boomers responded well to directive style management (Lewis 2005).

Generation X employees, who followed the boomers, are considered cynical (Salt 2007). They are known to be mercenary and firms cannot expect them to be loyal (Table 2). They matured and entered the job market during the stock crash of 1987, when jobs were hard to find and companies were “reorganizing” their value of workers. The Gen X-ers struggled to move upward because the boomers had all of the best jobs and the housing market was too expensive. Where the boomers experiences made them optimistic, the X-ers were resentful. A Gen X-er considers work as “just a job”, not a career. In comparison to boomers, some describe them as materialistic whiners, who have an attitude of entitlement and are not particularly hard workers (Raines 1997).

Table 2: Comparison of Baby Boomers and Generation X

	<b>Values</b>	<b>Technology</b>	<b>Environment</b>	<b>Safety</b>	<b>Work Ethic</b>
<b>Boomer</b>	Financial Security	Tool like wrench	Created Global Warming	We took the risks that we had too, we are “men”	Lived to work, love that overtime
<b>Gen X</b>	Personal Growth	It is part our lives	We have to clean it up	No job is worth risks to safety	Work to live, avoid overtime

Changing worker attitudes will require changing HR policies. Research to understand the direction of those new attitudes has been done by academics and firms. In 2001 a survey conducted by the 4<sup>th</sup> largest recruiter in the world, Randstad North America, surveyed approximately 6000 workers in Canada and the US, about work attitudes and priorities. The findings include (Randstad 2001):

- 9 out of 10 employees say that true success is about being trusted to get a job done; trust ranks higher than pay or title
- 67% rank flexibility as part of their personal definition of workplace success
- 81% of workers over age 55 are interested in trying new things
- 77% of Gen Xers say success is finding a company where you want to work for a long time. However, they may not stay.

Employees want a relationship with their employers. Traditional tasks and rewards are insufficient to create the type of bond that is likely to keep an employee. Companies must differentiate themselves, or workers will chase the money. Firms who have inherent cultural values can create pride within the work force and strengthen morale.

The shrinking labour pool encourages employers to keep their best employees and learn new ways to motivate the rest. Industries that fall behind in labour productivity are shutting down (Baldwin 2003). It will be critical for firms to get know their employees and identify what motivates them. Creating the right environment will increase their intention to remain with the current employer and not expend career energy looking for jobs elsewhere.

### ***The Economics of Pulp and Paper in British Columbia***

The pulp and paper industry in provides billions in provincial benefits. It employs over 100,000 Canadians, and in British Columbia 10,000 people directly and 20,000 indirectly.

The average pulp and paper hourly employee received \$96,000 in pay and benefits. The industry paid \$600 million in taxes to the government last year. However, the industry is in trouble. Price Water House Coopers recommends 12% ROCE (return on capital expended) for an industry to be sustainable. In BC, the return from coastal, interior and newsprint mills is 2.8%, 7.1% and 4.2% respectively (Hamilton 2007).

According to the Forestry Association of Canada, the industry consists of four large distinct business entities. First, trees are logged from our extensive forests. Second, the logs are debarked and the wood is processed in wood manufacturing plants which produces boards, panels and mouldings. Next, the wood left over from sawmills can be used in pulp mills to produce pulp and/or paper. The other wood waste, bark and sawdust, can be used as fuel in boilers or the sawdust can also be cooked and made into pulp. There are many secondary industries such as furniture makers and wood pellet plants, but these are not considered core to the forest industry. The total Canadian revenue from the forest industry was \$84 billion in 2005 and pulp and paper manufacturing was a major contributor.

According to Industry Canada there were over 140,000 Canadians working in the pulp and paper industry, during a peak in 2003. Although manufacturing in Canada has seen a slight decline in jobs, the largest drop has been in forestry. The number of pulp and paper jobs in British Columbia has declined from 23,700 to 15,200 between 1997 and 2007 (Statistics Canada Labour Force Survey 2008). The latest revenue comparison data, from 2003, show a slight industry revenue increase over ten years. However, after a couple of peaks, including over \$10 billion in 2000, there have been three consecutive years of declining revenue down by almost 50% in 2003. This is accompanied by productivity increases of 6.4% per employee. Therefore, the loss of jobs has been offset by productivity increases. BC's industry is improving, but still behind the world's leaders in Asia, Europe and America.

Pulp and Paper manufacturing is the second most capital-intensive industry in the world, behind the nuclear industry (Ebeling 2004). Labour intensive manufacturing has a different business and labour model because they can quickly set up and move. They rely on low skill

and a low cost labour, which are used in large quantities to mass-produce. High capital industries are very expensive to set up and once operating they must rely on high productivity to offset the capital invested. That capital is used to acquire the equipment and technology needed to yield higher production. The benefits for employees are high incomes and therefore a higher standard of living. However, the plants must be continually upgraded to remain globally competitive and the labour force must be equally competitive. Therefore, industries like pulp and paper must attract the very skilled and proficient. The technology within a mill is complex and the training opportunities for employees are equally complicated. To be efficient, firms must retain employees who they have trained and discourage employees from using those gained skills to acquire other jobs, outside of the firm. Employee retention is therefore an important factor for future viability.

Pulp and paper mill employees include professional engineers, power engineers, electricians, instrument mechanics, millwrights, pipe fitters, welders, computer technicians, and equipment operators. All of these skills are transferable to other industries such as mining, oil and gas, manufacturing and construction (Figure 4, Source BC Stats). There is also competition for these skills, with growing demand in the business services and health care sectors.

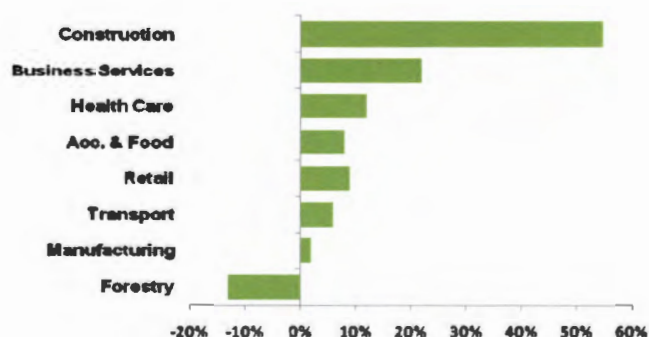


Figure 4: BC Job Growth 2001-2005



Pulp and paper mills are experiencing transformations within the work force. Workers are adapting to the changes in the job and economic markets. Jobs that were once stable, protected and well paying within the forest industry are disappearing quickly. The jobs that remain are less secure and part of the old economy. The human capital is moving away. Adaptation for the industry is important, but many mills have not done so in time. It will be important for mills to understand the attitudes and perceptions of their labour force if retention is to improve.

### ***What motivates a Pulp and Paper worker?***

If money were the solution to every worker's troubles, would we all be paid the same? The pulp industry has historically and continues to provide above normal compensation to workers. Of course, skilled workers are paid more than unskilled. However, due to the high revenues generated and tough working conditions, industries like pulp and paper have paid even unskilled workers more than other employers. For example, an electrician in housing construction makes less than one working in a pulp mill, or a janitor in a pulp mill can make \$22 per hour plus benefits.

Very few of the employees at a pulp mill obtained specialized pulp mill education or training prior to becoming employed. Other professions, like the medical professional, educators, masons, or accountants go to school before getting a job. The specifics may change, but those individuals decide what they want to do and they follow the career path. Conversely, most pulp and paper workers know little about the jobs before starting work. It is not until after they have had some experience that they decide to stay and begin any sort of formal training. Often the mill provides all training and covers all costs for external courses. This would include apprenticeships, safety, computer skills and specific technical training.

Pulp mills started as conventional entry points for unskilled labour. For centuries, humans have toiled to provide sustenance for themselves and their families. Pleasures were simple

for most people because their place within society was established and unchanging. Jobs were typically highly manual labour or farming. Work was about survival and job satisfaction was simply about compensation.

The industrial revolution had a profound effect on manufacturing and communities in the early 19<sup>th</sup> century. Technology dramatically changed the importance of manual labour and the value of the worker. The power of aristocrats diminished as budding industrialists formed a new wealthy middle class. Meanwhile new manufacturing jobs were created and workers were able to dramatically increase their take home pay. However, the working conditions were often poor and there were no labour laws to protect the abuse of workers. Scottish philosopher and economist Dave Hume had started a new way of looking at the human mind, and its motivation. He stated that man finds pleasure in utility (Chappell 1963). Although he was explaining how a worker would gain moral value through utility, his utilitarian model gained momentum from industry leaders who seized upon the part which benefited them and encouraged workers to work harder. The labour movement gained strength during this period. Labour was a commodity and labourers were used like the tools and machines within the factories.

Almost all of the mills in British Columbia are unionized. They all have similarly patterned collective agreements (Allnut 2000). The vast majority of the wages, job evaluations and benefit packages are negotiated through external intermediaries using rules established over past decades. This severely limits a worker's ability to gain a desired benefit when compared to a similar job in another industry. The contract is rarely changed, so inequities between industries are complicated to resolve. For example; a vibration technician may be offered \$45 per hour in an oil and gas plant. The pulp mill follows a different pattern that defines and limits pay to only \$40/hr. Although these numbers are unequal, the average pulp wages are significantly higher than manufacturing in general (Figure 5). This is because the unskilled wages are dramatically higher than those outside of the mill.

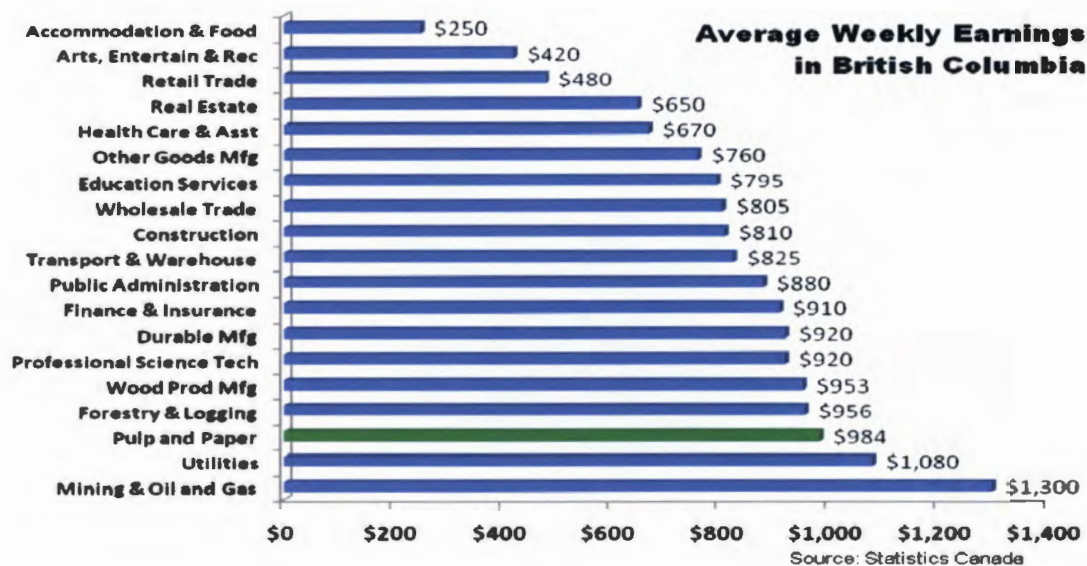


Figure 5: Pulp mill wages compared to other BC Jobs

Most mill jobs are on the dayshift. This would include all of the office staff, HR, engineering, technical, payroll, accounting, purchasing, senior management and most maintenance jobs. This is about two thirds of the entire pulp mill work force. The remaining operating jobs and a few maintenance jobs are shift work. According to Statistics Canada shift workers are more likely to be dissatisfied. Dayshift workers reported 7.7% dissatisfaction compared to rotating shift and night shift workers who reported 10.0% and 18.4% dissatisfaction respectively.

Workers have both a company supervisor and a union negotiated contract that define labour practices. A worker who is dissatisfied can complain to their supervisor and/or union shop steward. If the issue is not resolved to her liking and the topic is defined within the collective agreement, then a grievance can be filed. The grievance will work its way through a formal process, wherein senior delegates from the union and the company attempt to resolve the issue. If they cannot agree, then the grievance moves to third party arbitration. Both sides present their cases to the arbitrator who interviews key participants. After collecting sufficient details, the arbitrator will provide a ruling that is binding. Once the



complaint is formally filed, it is difficult to find a mutually satisfactory solution. In particular, the employee gets less involved as the grievance proceeds.

Collective agreements are not designed for the concerns of individual workers. Generally the entire work force is treated as a collective, as defined by the agreement. A worker who is better at a job is not paid more and is not treated differently. The contracts specifically deny special treatment. Substandard workers are protected in a similar way and cannot be easily removed from a critical role. It is indisputable that the interests of the company and interests of the worker are distinct. A company's objective is to gain the greatest production from the worker at the most effective cost. The worker's goal is to obtain maximum rewards for work done and sustain a safe and predictable relationship with the employer. It is the union's role to represent the worker since the company holds all of the power and advantage. However, a problem can be created with union involvement if the communication between worker and company becomes clouded as it passes through the union (Bennett 2007). It is important then for the employee to have clarity of each side's position and the dispute resolution process. Even a printed contract is subject to interpretation and representation by each side. How does this conflict resolution process aid employee satisfaction and improve retention? Research looking for relationships between the use of grievance procedures and employee turnover show a positive relationship (Cho 2005). The Cho study explained that employees might perceive the process as a threat. Certainly, the process is lengthy and the grieving worker will have to wait for a resolution. Regardless of the solution, the wait times increase dissatisfaction, and further exacerbate discontent.

Many years ago, during contract negotiation unions negotiated for better wages. Walk outs, or wobbles, were not rare. The issues were often over money or seniority. In the 1950's and 1960's a labour force might walk off their jobs for a twenty-five cent per hour increase. At the time, the mills were making huge profits and although they were not keen on raises, they could afford them. Eventually the wages became the highest in the industry and the workers looked for other securities and benefits. These included better seniority



language and job security (CEP 2003). Negotiations that are more recent have changed, as unions focus on long term benefits, work safety, training and long-term job security. The companies have sought more flexible work practices and concessions to become globally competitive. Wildcat strikes are unheard of and contract negotiations are structured. For workers, nothing happens without both sides being involved.

The dispute resolution process is structured to provide a consistent and unbiased response to worker needs. It is often a lengthy process and therefore creates new obstacles for employees. HR strategies and attitudes can reduce the number of issues that become disputes.

Today's pulp mill workers are highly skilled, but aging. Young workers are better educated and more knowledgeable of opportunities. As they enter the work force they have more relevant skills, than previous generations who walked in off the street. They identify pulp and paper mills with old dirty technology, not the sophisticated environment of the high tech. They all have computers, mp3 players and cell phones. They have less familiarity with machinery and manufacturing. The perception of a pulp industry in decline may be the coup-de-grace for pulp mills.

If firms could read the minds of their employees, they would have few excuses for discontent. Determining the factors that motivate and create job satisfaction, will shed some light on employee's attitudes. Happy employees should create happy bosses.

### ***Turnover, Employee Commitment and Quits***

Happy workers are expected to stay at jobs longer than unhappy ones. Understanding why an employee quits or wants to quit will help employers control retention rates, however, the job may have nothing to do with happiness. Consequently measuring happiness provides the employer with no useful information.

Instead, the employer must determine which factors create and increase an employee's intention to quit. Statistics on turnover rates provide trends of worker movement, but they do not explain why. Nor do they provide any direction on solutions. Exit interviews with employees who are quitting rarely provide a complete explanation of the reason for leaving. Employers can only work with the workers who are showing up each day.

There is an abundance of research on employee turnover (Mobley 1982, Price 1977). The Employee turnover is often categorized into three types; 1) leaving because the job is unsatisfactory, 2) leaving for a better job, or 3) forced to leave (Brainard 1991). The third category that includes terminations, illness, or death is not covered in this paper. The focus of this work is on voluntary turnover, which is defined as employees who leave at their own discretion.

Much of the early research was simple comparisons of job satisfaction factors to turnover rates. There was little investigation into the source of the satisfaction or reasons for leaving. One distinct difference was sales or piecework jobs. When pay is based on performance, the turnover rate is also related to performance. However, most jobs do not fall into this category. Meta analyses of research on retention factors such as promotion and opportunity for advancement are inconclusive (Carson 2005). Although the relationships are difficult to support in a consistent manner research offers diverse theoretical concepts.

There are several well-documented turnover models. These include "Price-Muller", "Mowday" and "Mobley". Price is considered a pioneering thinker. His 1972 study started with exhaustive research into turnover literature and evolved into a causal model of turnover. He found that economists gave high importance to pay, whereas social scientists favoured three factors; 1) belonging to a group, 2) communication and 3) whether the power structure was centralized. These factors combined to form an employee's job satisfaction. However, being content was not enough to prevent someone from leaving. Opportunities within the present organization or from outside, would determine the

commitment of an employee. This simple model was the first draft (see Figure 6) of what would become a full causal model for turnover. As the model developed, Price's graduate students became involved in administering the survey. To get a full set of results, required employees to quit. Only then, could correlations between satisfaction and turnover be indicated. However, the graduate students had deadlines and could not wait for turnovers to occur. So, they changed the paradigm and focused on "intention" to turnover. Since then, the "intention" model has been widely used and modified.



Figure 6: Price's Preliminary Causal Model of Turnover

Other research has compared workers in America to Japanese workers (Luthans 1985). There is a gap between the productivity of workers in the two countries and research suggests it is due in part to the workers attitudes towards the employer. In particular, there is higher organizational commitment in Japanese workers. This organizational commitment is the strength of the employee's identification with the employer. Porter, Steers, Mowday and Boulian (1974) describe three components, 1) understanding and acceptance of the firm's goals, 2) enthusiastic effort on behalf of the firm, and 3) a strong desire to remain with the company. The Japanese comparison involves many differences and is not directly applicable. However, the psychological components can be carried forward to North American research.

Canadian business graduates rated their top job priorities as opportunity for 1) advancement, 2) training, 3) good coworkers, 4) good supervisors, 5) challenge and 6) salary

(Maclean's Aug 2007). These are generally new workers entering the work force and have little working experience. Older workers would answer such questions from more experienced perspectives, and therefore the results would likely be different. The context and phrasing of turnover questions will affect the results.

Workers are generally content with their jobs in Canada (Lunau 2007). This is likely due to low unemployment, better compensation and improved working conditions. Studies by the Conference Board of Canada studies recognized Canada as a good place to work compared to other countries. The Economist Journal's global intelligence unit ranks Canada as the best place to live in the world. The search compared stability, healthcare, culture and environment, education and infrastructure. Canada had three cities in the top twenty; Vancouver, Toronto and Ottawa. It was considered to rank high because of low crime and a highly developed infrastructure.

### ***Leadership and Job Satisfaction Theory***

As long as humans have cooperated and clustered together, there have been bosses and workers. Those in command have always needed methods to get the greatest productivity from their workers. Most early methods were draconian and usually involved physical punishment to motivate the least productive workers. Job satisfaction was not important when the pyramids were built or during the crusades.

Socrates said, "The unexamined life is not worth living." Socrates recognized that when we interact we were able change our opinions, beliefs and attitudes (King 2004). Socrates' student Plato wrote in the *Statesman*, the importance of a leader to treat his subjects in a just manner. The politician or leader has great power and should only use it in ways that help those who are affected. Those decisions require dialogue with the stakeholders and the best use of knowledgeable facts.



Writings from the Middle Ages on leadership and the treatment of subordinates, centered on autocratic styles and manipulation. Although there are relevant observations in Machiavelli's *Il Principe*, "The Prince", he described the importance of the ruler to be feared by his subjects. Harvard and other business schools use Machiavelli's writings in their businesses classes because they believe, as Machiavelli did, that "fortune favours the bold" (Lagace and Badaracco 2001). However, Machiavelli also promotes leaders who have achieved greatness through lies and deceit. Although these are examples and used to illustrate, the reoccurring theme is the importance of appearing to have the qualities of a revered leader. He advises acting the role and appearing to do "good", is more important than actually achieving anything good. Machiavelli described the subordinates as simple and interested only in short term gratification. Therefore, it would be easy for the leader to hide his truly deceitful nature and portray a pious, faithful, honest and humane character. The worker did not need to know much about the nature or purpose of the work, and certainly, the leader should communicate, or lie where necessary. The end justified the means, or justified whatever was necessary to obtain the required worker effort. When it became necessary to achieve a specific aim, the behaviour could be as ruthless or dishonest as was necessary. This is a model that many leaders followed when choosing behaviour and treatment of their subordinates.

Fortunately, everyone became wiser and social scientists looked for new theories. Leaders continued to be interested in achievement, however there were new approaches to the treatment of workers. In 1785 Immanuel Kant discussed individuals as more than simple objects. We have sensibilities and experiences that create philosophical knowledge. This enables a worker to consider the moral value of their work and the purpose of effort. Kant went further to suggest that a moral imperative exists, which akin to a law of physics defines what is good. Therefore, a worker's job satisfaction would be defined by the moral obligation. Others followed this theory of intrinsic value.

Max Weber's 1904 theory of rational organizational structure described the importance of work being for the greater good. If the worker believes their contribution will improve society then they will feel better about doing the work.

Another perspective on worker performance was scientific. Fredrick Taylor conducted time and motion studies in 1800's. These studies were less interested in the worker's attitudes and more on rates of efficiency. The scientific approach was straight forward and easily adapted by industry. However, it did not take into consideration the differences of workers or their perceptions and attitudes.

Lawrence Joseph Henderson was a leading biochemist working at Harvard Medical School where he eventually became the director (Britannica 2008). Although his most important research work was as physiologist led him to the study of social systems. This is like many others scholars who did not start as sociologist. In particular, he was interested in human communication and social interaction. His research led him to the creation of Harvard Human Fatigue laboratory in 1927. There he studied physical and mental stress. The research on industrial psychology stimulated many others including pioneer Elton Mayo, and may have started Mayo considering the worker as a "social man" (Windeln 2004).

Elton Mayo's 1924-1927 Hawthorne Studies introduced a new approach to employee motivation. Mayo studied Sir William Mather's reduction of work hours in 1893. Mather's workers produced more in a 48 hours week than they had in 54 hours, and with fewer injuries. Mayo's research included slight changes to the workers' environment and corresponding changes to their productivity. For example, increases in the workplace lighting intensity increased productivity. Initial conclusions were that the dinginess of the work area created a depressing environment and lower production. To support the results, an opposing test was conducted, in which light levels were decreased. Surprisingly, the decreases also improved productivity. Further investigation revealed that the attention paid by the researchers had a high correlation. The lighting had a small effect by changing

the work environment, but the social interaction afforded by the researchers had a much higher effect.

Not all theorists were academics. AT&T telecommunications executive Chester Barnard recognized that subordinates could be motivated by either incentives or persuasions. In 1938 he wrote the book *The Functions of the Executive*. He developed a controversial concept of authority, describing it, as "Authority is the character of a communication (order)". He is known for his discussion of the difference between effectiveness and efficiency. Barnard is recognized that although there are times when leaders are decisive and followed without questions, greater achievement is made through cooperation (Barnard 1938). Workers responded favourably when they perceived involvement in the decisions and results.

Further studies showed that workers were more content and productive when they were within an approving and appreciative work group. Of particular interest was evidence that a positive work atmosphere could be planned and created. Although these concepts seem obvious today, they were revolutionary at the time of Talyor's scientific management style. Managers, who followed Taylor's theories, believed that repetitive work, like that done on the assembly line, was most efficient because through repetition the worker would continually get better and faster. It seemed obvious that if there were 10 steps in a manufacturing process, by dedicating a worker to each task the process was more efficient and productive. At some point, the worker becomes bored and disinterested. These disconnects result in errors, injury and decreased productivity. It could be argued that Mayo's humanistic discovery makes him the founder of employee motivation theory.

Psychologist Abraham Maslow's study of human needs was a ground-breaking work. Maslow observed his working colleagues and took notes on their behaviour. He distinguished between our basic need for food, water and sleep, from our higher-level needs of self-esteem and meaning. Victor Frankl had written of his own horrible experiences in the Jewish concentration camps of WWII. Frankl observed that when man is

just trying to survive, he has no interest in friendship or status. Yet, once his basic needs are met, he begins searching for satisfaction in less essential desires. In 1954 Maslow introduced the hierarchy of needs, which has been a building block for human motivation and job satisfaction theory.

About the same time as the hierarchy was published Fredrick Herzberg was working on his own theory of job satisfaction. His 1959 Two Factor theory separated job satisfaction and dissatisfaction as two distinct and unrelated factors. He asked respondents to describe times in their lives when they were happy or unhappy. The answers were independent. Herzberg separated the satisfying factors and called them the Motivators. These included recognition, challenge and responsibility. The factors that did not contribute toward satisfaction, he called Hygiene factors. These included compensation, benefits, status and job security. Regardless of this type of research, many companies were involved in time and motion studies. In practice, the motivation theories were harder to apply and companies were favouring the extrinsic rewards and penalties.

Douglas McGregor postulated another dual mode theory in his 1960 book *The Human Side of Enterprise*. McGregor observed businesses struggling with the management of their human assets. Firms could not decide whether employees were important resources requiring attention and effort, or if they were simply the first and easiest cost saving opportunities. At the time, most business leaders were being encouraged to be decisive, authoritarian and commanding. Workers were not to question, or innovate beyond the expectations of their supervisors. Workers had to be treated harshly and little was expected from them because they were naturally lazy and preferred to avoid work. This was named Theory X and was not far from Machiavelli's manipulative Prince. However, McGregor presented a new concept called Theory Y. If management recognized people as wanting to succeed, as self motivated, as energetic and ambitious. Then they could be given autonomy and empowered to achieve. Theory Y appeared as a revelation. Although it is not universally accepted, the attitude is well understood in well-read HR departments



today. Decades later Dr. Edward Deming would refer to McGregor and write, "Don't blame the people, fix the system" (McGregor 1960/2000).

Herzberg's theory has been built upon, dismantled and further modified. Research on job fulfilment has used various methods to rank employee satisfaction in terms of those intrinsic and extrinsic factors.

Edwin Locke defined job satisfaction "...as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke 1976). Edwin Locke was a leader in worker motivation and job satisfaction research and theory. Today he is a senior writer for the Ayn Rand institute.

The increasing importance of the human asset has made employee retention an important part of HR strategy. Since the 1970's companies and researchers have completed over 12,400 studies (Hom, Griffeth & Sellaro 1984). Firms expend great resources to hire and train their personnel. Identifying the causes of employee quits and solutions to retention is a primary objective of the research.

The relationship between job satisfaction and employee turnover is well established. In 1977, Mobley extended that research and introduced a model illustrating quitting as a process of decision making. The thought process and driving motivation are part of the assessment. When examining the job satisfaction factors, it can be argued that Maslow's hierarchy of needs is a foundation for modern motivation theory.

Understanding the evolution of leadership and job satisfaction theory provides a background for this paper. Since workers can choose their employers, there must be factors that they use to rank one employer over another. The next step in the research was to identify the most relevant factors.

## ***Job Satisfaction Theory Factors***

A selection of the most common job satisfaction themes is presented (Table 3). Herzberg's hygiene and motivation theory is a basis for much of modern motivation and job satisfaction theory. Paul Spector's job satisfaction surveys are widely cited in research literature and cover many of the reoccurring themes. One employment research group is the John J. Heldrick Center for Work Place Development is at Rutgers, State University of New Jersey. There are many business and planning schools, but Heldrick Center conducts a series of employment surveys on an annual basis. The strength is that the data can be compared year-to-year, and resulting trends studied. For example, their research showed very little employee job security concern until after the September 11<sup>th</sup> terrorist attack in 2001. Those political events destabilized the economy in such a dramatic effect that workers no longer felt as secure about their jobs.

The Heldrick annual Work Trends Survey asks questions about employee attitudes toward work and employers. More recently, the popular book by Leigh Branham, "The 7 Hidden Reasons Employees Leave" has been widely read. It addresses many contemporary retention issues.

Table 3: Common Job Satisfaction Factors

<b>Herzberg (Two Factor Hygiene and Motivation Theory)</b>	<b>Paul Spector Job Satisfaction: common factors</b>	<b>Heldrick Work Trends Survey 1998</b>	<b>Branham The 7 Hidden Reasons Employees Leave</b>
Motivators: Achievement	Appreciation	Ability to balance work and family	Job or workplace was not as expected
Recognition	Communication	Health and medical coverage	Mismatch between Job and Person
Work itself	Coworkers	Total annual income	Too Little Feedback and Coaching
Responsibility	Fringe benefits	Job responsibility and tasks	Too Few Growth and Advancement Opportunities
Advancement	Job conditions	Quality of work	Feeling Devalued and

		environment	Unrecognized
Growth	Nature of the work itself	Job Security	Stress From Overwork and Work-Life Stress
Hygiene: Policies	Organization itself	Relationship with co-workers	Loss of Trust and Confidence in Senior Leaders
Supervision and relationship with supervisor	Organization's policies and procedures	Retirement and pension plans	
Working Conditions	Pay	Relationship with supervisors	
Salary, Status	Personal Growth	Opportunities for advancement	
Security	Promotion opportunities	Education and Training	
	Recognition		
	Security		
	Supervision		

In the American General Social Survey the top ten most satisfying jobs between 1998 and 2006 were ranked; 1) Clergy, 2) Physical Therapists, 3) Fire-fighters, 4) Education Administrators, 5) Painters, Sculptors & related careers, 6) Teachers, 7) Authors, 8) Psychologists, 9) Special Education Teachers, and 10) Operating Engineers.

A 2002 Canadian Community Health Survey sampled 36,784 on job satisfaction. The vast majority were satisfied with their jobs, but 1 in 12 was not. 6% were "not too satisfied" and 2% were "very dissatisfied". The Canadian average dissatisfaction was 8.6% and the highest was in BC at 10.1%. Twelve percent earned less than \$20,000 per year, and were most dissatisfied. Those earning \$60,000 or more were least, at 4.5% dissatisfied. The older the age group the more satisfied. Women were marginally more satisfied than men were. Those working in resource industries, farming, forestry (logging), fishing and mining were most satisfied, followed by trades, then professionals, managers. Near the bottom of the

list was clerical, just slightly above processing, manufacturing and utilities. Pulp and paper would be in the least satisfied category at 16.7%. Those reporting more stress were almost four times more likely to be dissatisfied. Research on job satisfaction shows a strong dispositional component.

Employee retention is a complex blend of intrinsic and extrinsic factors. Organizational structure, job satisfaction, and personal aspirations are but a few of the competing dynamics (Morrell 2001). Work may be a source of income or a source of meaning. The psychological factors, which drive an employee, are an entire social science unto themselves. No pulp mill can afford a team of psychiatrists to monitor continuously the emotional state of each employee. Having said that, the mills certainly can afford to provide supervisors with tools for evaluating and motivating workers.

The number of hours worked by Canadians is increasing. Chronically long hours, more than 50 hours per week, are worked by 11% of Canadians in a single year. In back to back years only 4.6% work those hours, and in five consecutive years only 0.7% (Heisz 2006). Long hours and instability of hours is related to non-standard work, stress and bad health. Working Canadians work 157 hours less per year than Americans (Isgut 2006). Compared to other OECD countries Canada is in the middle at 1721 hours per year, where the US is high at 1878 and France is low at approximately 1500. Germans and French take 21.8 days holiday per year, Americans 7.5 days and Canadians about 20 days.

Improving job satisfaction may lead to increased employee retention. Conversely, an employee may quit when they become dissatisfied with a job. However, there is no *a priori* relationship. Job satisfaction theory is not a happiness index, and is more complex than employees simply quitting their jobs when they are dissatisfied (Taylor & Chin 2004). Many factors determine the job a person chooses. An employee may stay even when a job is dissatisfying because there are still bills to pay and food needed in the kitchen. The Taylor and Chin study found that when answering a job satisfaction survey not all respondents answer in a consistent manner. Their answers depend on their perception of the context of



the question. Some see satisfaction relating to their jobs and others to their quality of life. It is recommended that future surveys provide instructions to the respondents, which provide a specific context for answering the questions. For example, a job satisfaction survey should be answered from the employee's view of their job and their employer, rather than from their view of their family life, comparative looks or social class.

Understanding employee motivation requires understanding of the worker's perception of their job. The Hackman and Oldham Job Characteristic model defines five core job characteristics, which create the conditions for workers to experience three psychological states (Dessler 2007). The worker's mental attitude is related to motivation, performance, satisfaction and ultimately turnover. This model further supports the proposition that outcomes are ultimately affected by an employee's personal motivation to grow or to be challenged. Therefore, it is important for the management group to understand individuals before embarking on a job redesign process. Some people avoid responsibility and prefer a steady diet of predictable, repetitious work. They just want the tools and resources to get the work done.

When building a survey it is important to phrase the questions in a clear and consistent manner. All respondents should answer from the same context and goal.

### ***Employee Data and Statistics***

There are extensive data available through Statistics Canada and other survey databases. The most applicable surveys are the Stats Canada General Social Survey, GSS, Workplace and Employee Survey, WES, Labour Force Survey, LFS, and the American Job Satisfaction Survey, JSS. Also, Stats BC has data that is location and industry specific for pulp and paper mills in British Columbia. An attempt was made to use existing questions from these sources for better comparison purposes. Although they include some components of the employee retention theory they were not thorough enough. A complete question set was required. The questions had to cover the factors identified as most related to retention based on the meta-analysis.

The Wellness Council of America publishes a one page survey asking workers thirty three questions, to which they respond yes or no. These questions include “I trust our leadership team”, “I respect the work of my peers” and “My opinion counts”. Each yes garners two points and the results are totalled for all questions. A score above 50 points is a great job and below 30 is a poor job. The method is simple and provides a sense of the employee’s perception of their work and employer. The questions appear well constructed from established literature. The survey does not provide any indication why the employee is unhappy, or what facets of the job are less desirable.

The question set draws upon the literary research. Most of the themes are reoccurring in the literature and therefore support use as a basis for questions. There are many studies done on smaller scales which could have been duplicated, however these were primarily in health care, military and educational institutions. Therefore, they could not be directly compared since the context of those surveys was different and would have affected the respondent’s perception of each study.

### ***What makes people happy?***

Knowing what makes individuals happy should help managers design HR strategies that keep employees coming back for more. Most companies have no trouble paying for equipment that is more efficient and productive. However, happiness is not as easily purchased or repaired. Results from many surveys show that people are getting wealthier, the standard of living is rising and the number of very satisfied people is in decline.

Richard Layard’s 2005 book *Happiness: Lessons from a New Science* shows that we are less happy than those 50 years ago, but we are twice as wealthy. Social research has shown that we are happiest having sex or socializing and least happy at work or commuting. Of course, our moods and feelings fluctuate as we think about family or money, and are affected by

external factors. Regardless, we all know there are qualities of happiness. Finding the intrinsic type can provide long term rewards, including making us healthier and live longer.

With rising incomes we are richer, but why aren't we happy? Bronze Olympic medalists are happier with their achievements, than silver medalists are. This is because the silver medalist feels like he/she have just missed gold. The bronze medalists are happy that they did not finish fourth. Therefore, our happiness seems highly dependant on our perception of our achievements. For example, if we get a raise, we are happy. However, if we discover a co-worker got more, we are unhappy. Much of our inner feelings come from our perception of ourselves, in relation to others.

Happiness is a very different study. Employees will stay working at jobs that are not satisfying and almost all workers look forward to retirement. There are other reasons for working. Therefore, this paper focuses on employee intention to remain.

## **Chapter Three : Methodology**

This paper's objective is the identification of employee retention predictive factors in a British Columbia pulp mill. An effective data set would enable classification and ranking, with the aim to develop solutions that decrease the number of quits. With the vast amount of research available on job satisfaction and retention, a meta analysis could have been used. However, there was no research found on the specific British Columbia Pulp mill retention topic.

The method for this research included five stages. The first stage was a review of existing literature. Job satisfaction and human motivation are two very widely studied topics. Studies have been done by economists, physiologists, engineers, social psychologists and social scientists. People are a foundation of all business, whether as agents, principals or customers. Therefore, almost everyone else has a theory on what makes workers tick. A review of existing research on the BC pulp and paper industry, job satisfaction, employee motivation and leadership styles was completed.

The second stage was development of the hypothesis in the form of a research question. The hypothesis built on the research literature studied. The objective is an explanation of employee intention to remain factors for workers in a pulp and paper mill.

The third stage was development and deployment of a questionnaire. Employee retention literature supports the relationship between employee quits and job satisfaction. The survey questions are new, but were based on existing research and models of job satisfaction.

The fourth stage was analysis of the survey questionnaire data. The analysis included both a statistical review of the numbers and a more thorough examination of correlations.



The fifth stage was development of conclusions based on the analysis. This included relations between the results and existing research, as well as limitations of the study and suggestions for further work.

### Why a Questionnaire?

Although secondary research, direct measurement and observation can be used to gain information there is no better method of gaining information on a group of people than through a sample survey (Rea 2005). Local research must be done to understand the site-specific intentions of employees. A standardized cross sectional survey was used to identify and rank the employee’s intention to remain. The minimum sample size required to achieve statistical significance was calculated using Cochran (1977) techniques.

$$\text{Sample Size, } N = \frac{N_o}{(1 + N_o / \text{population})}$$

$$\text{Required Return Sample Size, } N_o = \frac{t^2 \times s^2}{d}$$

N	=	?	minimum sample size, for statistical context defined below
pop	=	500	total population size
t	=	1.96	value for selected alpha level (ie. 0.025, each tail = 1.96)
s	=	1.125	standard deviation, based 9 point scale with 8 divisions
d	=	err*D	acceptable margin of error of mean
err	=	0.03	margin of error
D	=	9	points on primary scale (ie. Likert scale of 9 points)

Sample size calculated is N = 59, for significance of 3%  
Sample size calculated is N = 115, for significance of 2%

To evaluate and compare the responses in the survey the questions were designed to be answered using nominal, ordinal and interval questions. Scaling of the responses can be tricky because differently phrased questions will yield different responses on the same topic (Throchim 2006). The advantage of scaling is its ease of comparison between responses.

A dependent variable is established and independent variables are scored using an interval Likert ranking.

None of the questions could be considered open ended. This was done for analysis purposes. Some questions had an optional “other” category, in case the respondent’s answer was not available from the choices offered.

Industry specifications are classified using the NOC and NAICS systems. These are the most commonly used classifications in Canada and the US. Paper manufacture is NAICS 322 and pulp manufacture is as subset 32211. A common code for the survey use was 3221: Pulp, Paper and Paperboard. Using these systems, existing data from other industries can be compared.

A problem with much of the research data found is that Statistics Canada tends to group industries. In many papers there is no separation of 3221 from the other forestry categories, or manufacturers. In fact, almost all of the relevant WES, LFS and GSS papers are presented with a single group called Forestry, Mining, Oil and Gas. This makes comparison very difficult since some pulp workers may be quitting to join the oil and gas industry.

### ***Core Question Set***

Achieving effective survey results requires relevant questions asked in the proper manner. This was a unique questionnaire and used appropriate questions based on existing research.

The questions were aligned with the recognized employee motivation and job satisfaction factors.

Many factors determine whether an employee is likely to remain with the current employer. These factors include a multitude of perceived intrinsic and extrinsic values. Creation of a list of all the factors presents a practical problem because the list is far too long to use effectively in a survey. To get the survey questions to a reasonable size some core factors are required. The core set is those factors, which reoccur in literature, and are most highly ranked.

Statistics Canada has done work on employee satisfaction, as has the American Census Bureau and Gallup in the US. All were national surveys with a large number of respondents. More importantly, they have been used extensively in research and have undergone thorough criticism. For these reasons, their style and methodology would be a stable platform to build from in this survey. There are many research studies, questionnaires and surveys on these topics. Some have specific targets, such as the military or health care profession. There are fewer all-purpose employee retention and job satisfaction surveys, which pose general questions without site bias.

The most applicable broad-spectrum surveys are the Stats Canada General Social Survey, GSS, Workplace and Employee Survey, WES, Labour Force Surveys, LFS, and Gallup Q12 Employee Satisfaction Survey. There are many other Job Satisfaction Survey, JSS, type surveys and research papers done by institutions and researchers. They all offer perspectives; some are more widely cited and used as a basis for other work. The analysis tends to break the job satisfaction, employee motivation and turnover into several reoccurring categories. These include compensation, the work, supervision, co-workers, and advancement. These could be further broken down into the intrinsic and extrinsic components.

The format for most of the surveys included demographic questions before the job satisfaction questions. This provides some background on the respondents and certainly, correlations would expect to be different between single and married, or young women and old men.

### ***Finding Core Questions in Existing Literature***

A review of established questionnaires and surveys was done. If existing questions from recognized surveys could be used, then the results could be compared. Also, existing questions would have gone through rigorous preparation which would minimize any bias. The questions set designed for this paper was designated the Pulp and Paper Employee Intention to Remain Survey, PPEIRS.

### **Statistics Canada: General Social Survey**

Five questions from the GSS were relevant. However, the format for the GSS includes an intro to each section and creates its own bias. The GSS includes a Life Satisfaction module. Prior to asking questions in the section the interviewer sets the tone for this section by reading, "I am going to ask you to rate certain aspects of your life." Although job and life satisfaction have an impact on retention, this paper focuses on employee retention. Therefore, the GSS questions, which ask about life and not work, cannot be directly compared. However, some questions do focus on job satisfaction factors. From the GSS these are relevant and are used as background for the core PPEIRS set. These are:

- LS\_Q120: Please rate your feelings, using a scale of 1 to 10 where 1 means very dissatisfied and 10 means very satisfied, about your job or main activity.
- LS\_Q210: Using the same scale, how do you feel about your life as a whole right now?

- MSS\_Q120: What is your main source of Stress? 1) Work, 2) Finance, 3) Family, 4) School, 5 ) Other.
- MAR\_Q125: Are you looking for paid work? This question was only asked if the respondent had indicated they were unemployed.
- MAR\_Q510: Are you very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied or very dissatisfied with the balance between your job and family and home life?
- MAR\_Q520: Why are you dissatisfied? Asked only if respondent had stated they were dissatisfied earlier.
- TRT\_Q390: How much do you trust the people at work? 1) Cannot be trusted at all, 5) Can be trusted a lot.

Figure 7: GSS Life Satisfaction 2003 Canadian Census Results



Interestingly, results from the GSS life satisfaction question, show that people are satisfied, and work is very satisfying for the vast majority of respondents (Figure 7).

### Statistics Canada: Workplace and Employee Survey

For decades, Statistics Canada has administered the WES. The survey examines employee outcomes, workplace characteristics, worker/job characteristics, and workplace outcomes. A focus for the survey has been the link between events occurring at workplaces and the resulting outcomes for workers.

- X1.1: Did you leave this job or did the job come to an end?



- X1.2: What was the main reason for leaving this job?
- JC8: What is the minimum level of education required for this job?
- JC10: How many paid and overtime hours do you work per week?
- JC12: Given your rate of pay, would you prefer to work more, same or less hours?
- JC25: In the past 12 months have you received any classroom training?
- JC 31b: How often do you participate in employee job rotation or cross training program?
- JC31g: How frequently are you part of a self directed work group?
- JC33: In you job, are you a member of a union or covered by a collective bargaining agreement?
- JC34b: What mechanisms were used to address your dispute, complaint, or grievance?
- JC38: Considering all aspects of this job, how satisfied are you with the job?
- JC39: Considering the duties and responsibilities of this job, how satisfied are you with the pay and benefits you receive?

### **Statistics Canada: Labour Force Survey**

The LFS concentrates on employment and economic indicators. These include employment and unemployment characteristics, demographics, industry and regional results. There were no job satisfaction questions as part of the LFS. The demographic question format was used as a model.

### **Gallup Q12 Questions**

These questions cover the same themes discussed earlier and the core set incorporates these factors. None of these questions were used because the wording follows a different format.

1. I know what is expected of me at work.
2. I have the materials and equipment I need to do my work right.

3. At work, I have the opportunity to do what I do best every day.
4. In the last seven days, I have received recognition or praise for doing good work.
5. My supervisor, or someone at work, seems to care about me as a person.
6. There is someone at work who encourages my development.
7. At work, my opinions seem to count.
8. The mission/purpose of my company makes me feel my job is important.
9. My associates (fellow employees) are committed to doing quality work.
10. I have a best friend at work.
11. In the last six months, someone at work has talked to me about my progress.
12. This last year, I have had opportunities at work to learn and grow.

### **Use of Existing Format and Questions**

The Statistics Canada format is well established and would be recognized by many respondents. Familiar adds a level a comfort. For this reason, its format is used as a building block. Similar to Statistics Canada, the Pulp and Paper Employee Intention to Remain Survey, PPEIRS, has an introductory section which provides potential respondents with some background on the purpose of the questionnaire and how the results are to be used. The core of the questionnaire has four question areas; 1) introductory, 2) demographic, 3) Dependent Variable and Independent Job Satisfaction Factors, and 4) Perception of Workplace Retention. The sections are not separate, so the format is as smooth and uniform as possible.

The demographic section asks about location, sex, age and other personal characteristics. It also includes questions about industry and job type. The third section poses the questions for dependent variable: intention to remain. In the third section, questions Q13 to Q43 pose job satisfaction questions. Section 4 asks three ranking questions. The respondents are provided with a list of job satisfaction factors and asked; 1) rank the top five, 2) rank top five reasons to stay with an employer, and 3) top five reasons other employees have quit.

Some of the questions from the GSS and WES were considered, however the wording and format had to be changed. Overall, none of the surveys provided the exact questions that were required for this work. The developed set of survey question is unique. The new format aligned with the focus of this paper. The core set includes critical retention factors. The final set of questions has a common presentation (See page 100).

### ***Consultation and Test Survey***

During development of the survey core question set, the concept needed to be reviewed with HR professionals working in the pulp and paper industry. Pulp mills are experiencing labour turnover. The turnover is reasonable at the hourly level and most is due to retirements. Rehiring for those positions is also reasonable but slow. Mills are using higher entry standards. During the past decade entry requirements have increased to include a minimum grade 12 diploma, a passing grade on a mill administered exam and drug and alcohol testing. Although hiring of unskilled entry level workers is taking several months to complete for each position, there are no shortages of applicants. It is common for applicants to have college or university educations. This reflects the changes to the educational demographics (Figure 3).

Sometimes an employee quit aids an organization. The turnover is judged positive, when discontent employees leave or when new employees bring fresh ideas, (Lucas 1990). However, the HR professionals described the turnover of management staff as high. Replacement of these positions is particularly difficult. Even with many mills closing across the country, the departing trades, engineers and skilled employees are having no trouble finding jobs. Many do not return to the pulp industry, because they are either unwilling to relocate, or they decide to move into industries that are not perceived to be in decline.

Consultation with the HR group provided some focus on the core question set. It also helped eliminate some of the employee retention topics. For example, there is no need for

a question relating job and person mismatching. Pulp mill employees experiencing such a mismatch can quite easily apply for job transfers and postings. The HR group will acknowledge an employee who is constantly submitting applications to exit an existing job.

Prior to starting the formal survey, a short form test survey was developed and issued to a group of HR professionals. Labour retention issues and reasons for employee quits were also discussed with small groups of staff and hourly employees. The HR group had not done any formal research on employee retention or job satisfaction. They had conducted exit interviews with some of the departing employees. The format is several formal questions about reasons for leaving and attitudes toward the past employer. Almost all of the exit interviews were positive and departing workers described their job experiences positively. Most often the reason for leaving was for another opportunity or because of an external factor. Some of these factors were related to spouse, children, weather and location.

The discussions with staff and hourly groups were quite different from the HR department. These groups provided unsubstantiated anecdotal theories. Most were rooted in personality conflicts, poor relationships with supervisor(s) and burnout. Only a handful of employees who left were interviewed. Again, their responses were mixed and inconsistent. Not all would have stayed. Generally, it could be said that some would have stayed if certain conditions had been remedied or perceived problems fixed. The questions included in this survey cover these issues.

### ***Assumptions and Biases***

All research has strengths and weaknesses. During development, it was critical to understand the goals of the work and focus the research effort in such a way as to achieve the most accurate results. In all research, some of the true weaknesses are not revealed until after the results are analyzed and then the weakness becomes apparent. Efforts were made to identify and minimize bias wherever possible.

The survey was deployed at a number of locations. However 82% of the 107 responses came from a single work place. No conclusions can be drawn from comparisons between locations, work places or company types. Respondents from a large pulp and paper mill constitute the largest source and represent over 20% of the mill's employees. The pulp mill data is considered representative of the entire plant.

The researcher is employed at the pulp and paper mill that is the primary data source. History and experiences at the mill create predispositions, but they do not prevent the research from being impartial. The researcher also has multiple experiences at other mills. Diversity is more likely to create some balance. If on the other had, having had no mill experience would also have created bias.

Over the past decade this mill has, experienced employee quits and has hired new employees. This is similar for other mills and employers in BC. All personal experiences create bias, but this study relies on research and data to support all theories.

Building of the question set relied on research from work places other than pulp and paper mills. To use the data some assumptions are used:

- Some research studies group pulp mills into forestry, which includes sawmills and support services. Others refer to forestry as logging, or pulp and paper as manufacturing. Where the data refers specifically to workers in forests or rural communities, this study uses the data for pulp mills. Salaries or technical competencies are not used.
- Most BC Pulp mills are traditional industries with unionized work forces and collective agreements. This would be similar to manufacturing, steel, and mining industries.



- The data can be used to infer attitudes in other, non-sampled, BC pulp and paper mills. BC mills have similar organizational structure, collective agreements and cultural issues. Specific management and locations are different, but frequently management has moved from mill to mill.
- Worker attitudes towards work in BC are similar to those elsewhere.

There was one retention factor that was not specifically addressed in the questions set, but did become apparent during evaluation of the results. This was a “spousal” effect on employee intention to remain. The results and additional research on this topic are included in the results section. In a future survey this factor would be added.

### ***Survey Target and Deployment***

The target population is BC pulp and paper mill workers. A few other industries and employers were also surveyed to gain data for comparison purposes. Surveys of employees who have quit were not done. They are difficult to administer in an unbiased manner because the sampling is much less random. This is because surveys of departed employees can only be given to those who have left detailed contact information. In addition, they must be willing to participate and their motivation for responding is unknown. Since the sample size is small, there will be little statistical significance (Rea 2005).

The surveys were distributed in a paper format and self-administered. Prior to completing the questionnaire, respondents were given, or read, a description of the survey. This included the survey’s employee retention topic and focus on pulp mills. In addition, they were told that results would be available through UNBC. Respondents may decline answering. There will only be one set of questions.

The survey was eleven pages long. There were 49 questions and some of those include sub sections. In total, 64 answers were expected. The questionnaire took between 20 to 30 minutes to complete. The language was simple, direct and familiar based on the research done. The layout and presentation followed other Statistics Canada formats, although the look and question wording was distinct. The wording was non-threatening and reviewed for sensitivity. The questions started simple and broad, and became more detailed and specific.

### ***Research Design and Analysis***

This paper addresses these specific questions for BC pulp mills:

- Are the number of pulp mill jobs declining?
- Are pulp mills perceived as less desirable employers?
- What factors indicate pulp mill employee intention to remain?
- Where are the HRM opportunities to improve employee retention?

This paper is not a forecast for the pulp and paper industry, employee motivation study, general job satisfaction survey, labour relations study or a meta analyses of existing research. However, all of these concepts and issues are used and referenced.

A single mill was the target for the questionnaire. This was manageable from a research perspective and control of the surveys. Questionnaires were also sent to an accounting firm, a bank, a chemical plant, another pulp mill and an educational institution. These other locations represent 10% of the total respondents.

Mobley described employee turnover as a series of steps toward the exit door. The Mobley (1997) model starts with the employee, a) evaluating their job and deciding, b) job dissatisfaction, which prompts, c) reflection on leaving, but more evaluation is required, d)

consideration of effort to look for a new job, e) the cost of leaving, which if perceived as low, f) seriously consider a job search, g) the actual job search, h) gathering of information on options, i) comparison of new and old, j) choice between staying, or k) quit. If an employer intervenes during one of the stages, the employee can be either moved off the path, or moved further along. This path suggests the effect of perception and social factors.

More recent research has sought a correlation between psychological factors and employee quits, or job dissatisfaction (Dalton 1993). This research does not investigate any connection between absenteeism, depression or an individual's medical condition.

Many studies and surveys have used a ranking scale for comparison purposes. Rensis Likert's interval Likert scale is very commonly used. Wherein the respondent is posed a question, and asked to respond on a numbered scale. One end of the scale might be strongly agree and the other end strong disagree. Then all of the points in between are proportional to the extremes. Statistics Canada uses this method in many surveys. As an example, their nationally deployed General Social Survey asks Canadians to rate their finances, on a scale of 1 to 10 where 1 is very dissatisfied and 10 is very satisfied. An eleventh option is "no opinion, don't know or refusal".

In 1955, Theodore Kunin developed a satisfaction survey in which respondents were asked questions and then responded to an 11 point scale. The scale had pictures of faces. At the "satisfied" end the faces were smiling widely. At the dissatisfied end the faces had hard grimaces. Each of the nine intermediate faces was a variation on the smile or grimace and proportional to the distance from each end.

Each question has a variable associated with it. For example, question number 2 "Male or Female?" has the variable 2sex. Potential factors affecting employee motivation and retention are listed below in no order (Table 4).

Table 4: Factors that affect motivation and retention, in variable notation

	<u>Variable</u>
Location	Loc
Sex	Sex
Age Category	Age
Marital Status	Marital
Number of Children	Child
Type of company worked for	Firm
Type of job	Job
Years worked for current employer	yr_curr
Years remaining to work	yr_remain
Percent of years remaining not with current firm	%yr_notcur
Percent of planned working life with current firm	%life_curr
Company options when an employee is planning to quit	quit_option#
Pay of other employees is appropriate	other_pay
HR practices are modern and progressive	hr_prac
Company is loyal to its employees	firm_loyal
I am loyal to my company	emp_loyal
I am paid appropriately	emp_pay
My employee benefits are appropriate	emp_ben
My employee pension plan is appropriate	emp_pen
Bonus is appropriate	emp_bon
Relationship between work and pay is appropriate	emp_work
At work I feel part of a team	emp_team
Diverse work group	emp_divrs
Belong in work group	emp_belng
Workload	emp_load
Challenge	emp_chal
Work is meaningful	emp_mean
Flexible work hours	emp_hrs
Work environment	emp_env
Promotion opportunities	emp_promo
Training opportunities	emp_train
Treated better than others within my organization	emp_treat
Job security	emp_secur
Industry is sustainable	emp_sust
Able to influence	emp_influ
Control over my job assignment	emp_ctrl
Communication with my supervisor	emp_comm
Receive suitable recognition	emp_recog



Influence over company vision and direction	emp_vis
Support for career advancement from my supervisor	emp_car
Good relationship with my supervisor	emp_sup
I would want my son/daughter to work here	emp_son
Life stress	emp_stres
Top priorities for job satisfaction	job_satsf#
Reasons to stay working at the current employer	job_stay#
Reasons coworkers have quit	job_quit#
Company's environmental impact	Enviro
Turn back time, what would you do	Timeback
Recommend my job to others	Recomd

Question formats include a mix of nominal, ratio, ordinal and interval scale. Nominal questions include sex and marital status. Ratio questions include age and number of children. Ordinal questions include job type and ranking of reasons to quit. Most questions are interval, using equidistant values along the Likert scale to rank satisfaction with pay or level of life stress.

Design of the Likert scale was considered in terms of the length and direction. The length is the number of options, and direction describes which end is "agree" or "disagree".

Research recommends that the scale have an odd number of responses (Rea & Parker 2005). This provides a center, or neutral, point. Some surveys use even numbers to force the respondent to take a position. For example, Statistics Canada often uses a 1 to 10 point scale. The number of choices on the scale is mostly arbitrary. The most common number of questions is 5, 7 or 9, although 6 is also commonly used. However, some research suggests that the five is a good number for less educated respondents. Since this survey was designed for complex industrial plants and could be used in professional environments a larger choice set was selected. Following Statistics Canada surveys, the scale is "disagree" on the left and "agree" on the right.



A larger scale does provide more options for answers. If the sample size is small, then the larger answer scale will provide greater variation for data analysis. A nine point scale from 1=Strongly disagree, to 9=strongly agree is used.

The questions, which require respondents to provide a ranking, have a scale below each question. Following the GSS format, a description is provided above choice #1; "strongly disagree" and above choice #9; "strongly agree". There is no text associated with any other numbers. In terms of analysis, the distance between 1 and 2 is considered equal to the distance between 7 and 8, which is the same as all others.

There were a great number of variables and possible correlations. Factor analysis of the data was used to identify correlations, even between factors where no correlations were thought to exist. The analysis for this research was conducted using the statistical software package SPSS/PC+ 15.0, on a University of Northern British Columbia server via a remote VPN internet connection.

## **Chapter Four : Analysis of the Questionnaire**

One hundred and seven questionnaires were returned. Twenty percent of the target mill population responded to the survey. Ninety percent of the respondents work in a pulp and paper mill, 82% were from a single mill and 8% from another mill.

### ***Survey demographics***

Of those returned, 103 were used for analysis and the remaining four questionnaires were either blank or respondents declined. Of the respondents, 80% were male and 57% were over age 35. In terms of marital status, 72% were married, 11% were single never married, 9% single previously married, 5% separated and the remainder declined to answer.

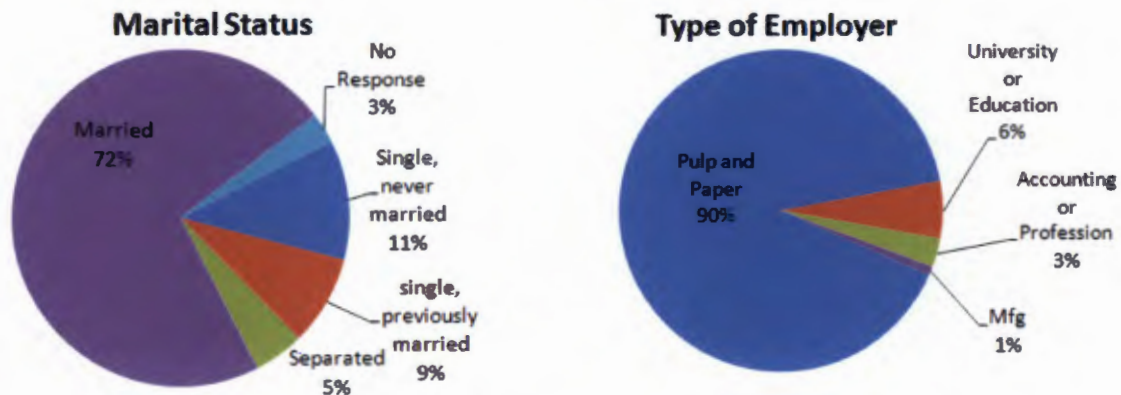


Figure 8: Survey Results: Marital Status & Type of Company Worked For

Seventy-eight percent had children. The children were 11% preschool, 14% elementary school, 18% secondary school, 34% between school and age 25, and 24% over 25 years (Figure 15).

Although most of the responses came from the pulp industry (Figure 16), there are many different jobs inside of a mill. Operators made up 28% of respondents; the second largest group, 26%, was engineers, technologists, technicians and scientists. The rest were: administration 14%, managers 11%, trades people 8%, supervisors 8%, general equipment

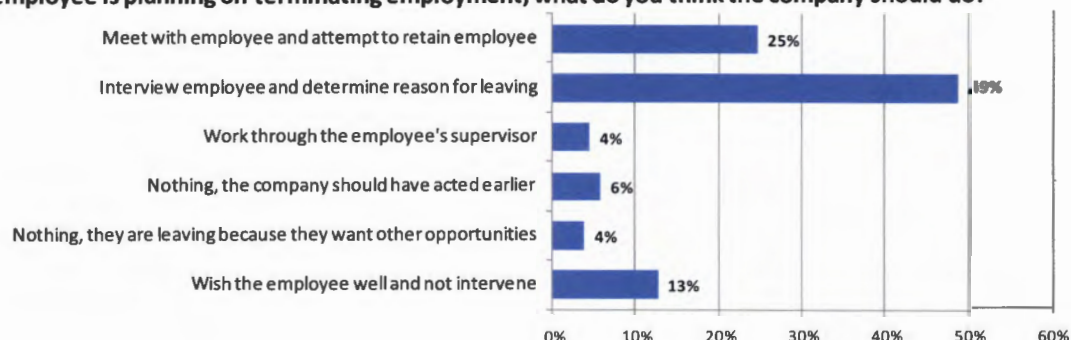
operators 5% and 2% accountants (Figure 17). On average respondents had four previous jobs, the median was three. This suggests the weighting toward having had fewer jobs. On average respondents had worked 15 years with their current employer, the median was 11.

The average respondent had 15 years left to work and planned to work 10 years with the current employer. The medians were 13 years left to work and 10 with the current. In terms of entire working life, 83% expected to work with their current employer.

When asked what the company should do if an employee was intending to leave, respondents thought the company should intervene. Seventy-eight (78%) thought the company should work with the employee, only 10% suggested doing nothing (Figure 9).

Figure 9: Respondents - How should the company respond?

**Q12: If an employee is planning on terminating employment, what do you think the company should do?**



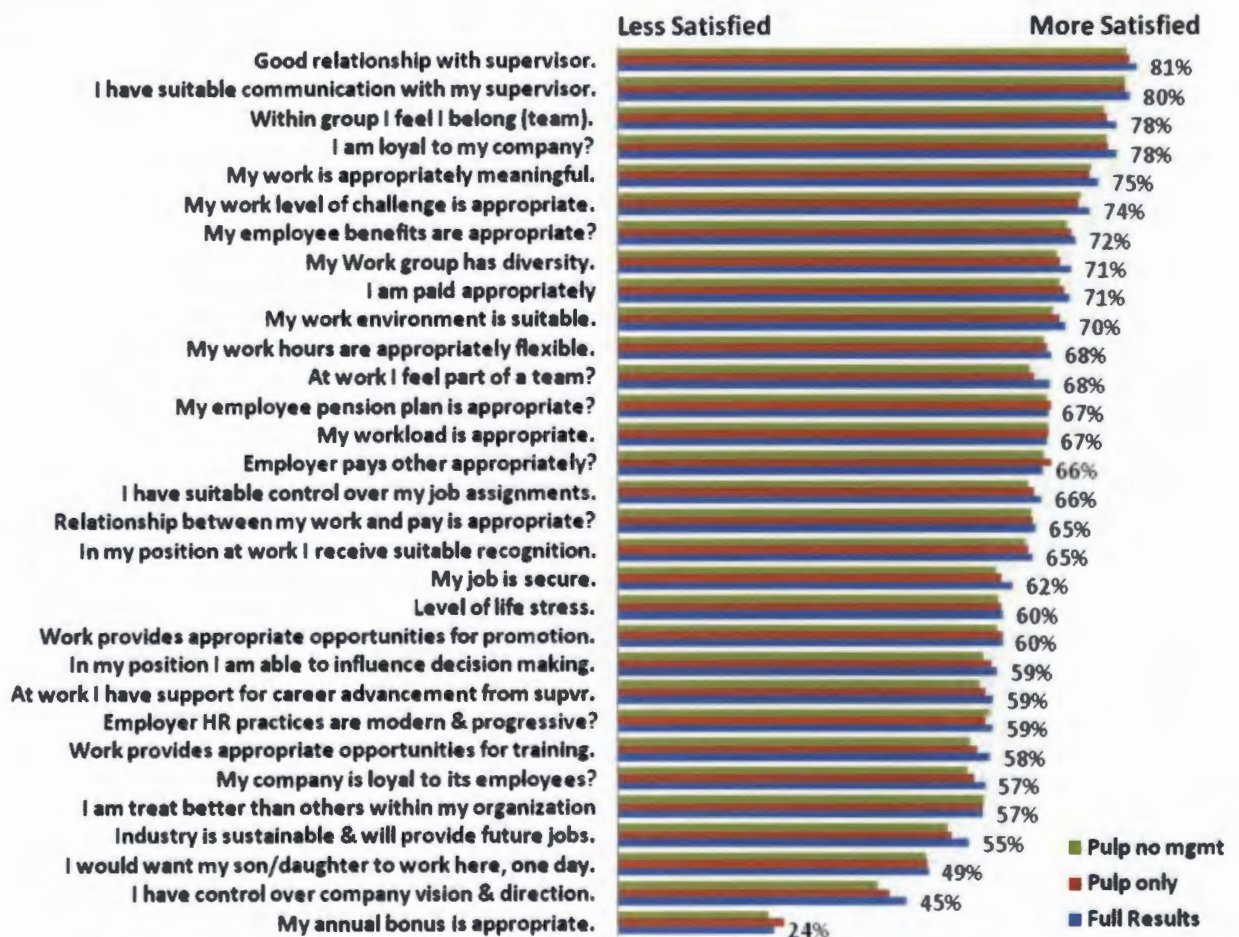
## ***Satisfaction Analysis***

For the questions that used the Likert ranking scale, a satisfaction factor was calculated. At the bottom of the scale 1 = strongly disagree and at the top 9 = strongly agree. Using a weighted distribution of the responses, the satisfaction factor was calculated.

$$\text{Satisfaction Factor} = \frac{\sum \{ \text{response} \times \text{weight} \}}{\text{Total number of responses}}$$

Although this is not a perfect indication of satisfaction, it does provide a data set for comparison purposes. The average is 64%, leaning toward satisfied. The Canadian average in the GSS was 73%. “Relationship” (81%) and “suitable communication” (80%) with supervisor are the highest. “I have control over company vision” (45%) and “bonus” (24%) is the lowest. Hourly employees in pulp mills do not get a bonus. Supervisor relationship and communication are high suggesting that supervisors is good in those areas, however the supervisor’s support for training is 20% lower.

Figure 10: Satisfaction Index





In terms of compensation, most indicated they were just satisfied with their pay (71%), but that colleagues were not as well off. Employee benefits and pension plans were also marginally satisfactory. The response to bonus was very dissatisfied.

The results are slightly different when done for the pulp and paper mill only. Respondents are still generally satisfied, with the average response 64% satisfied compared to 74% for non-pulp mill questionnaire respondents. Most scores for the pulp segment were slightly lower. The three largest differences were “my industry is sustainable”, “I have input on direction” and “my bonus was appropriate”, which were 3%, 3% and 2% respectively lower, than the sample average.

When asked to rank the amount of life stress, where 1 = not stressed at all and 9 = extremely stressed, respondents had a distinct median of 6. The result was only 0.1 higher for the pulp only group (Figure 11).

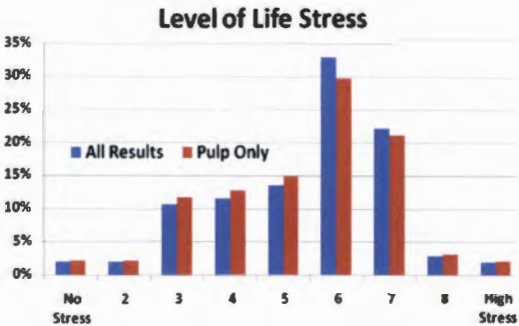
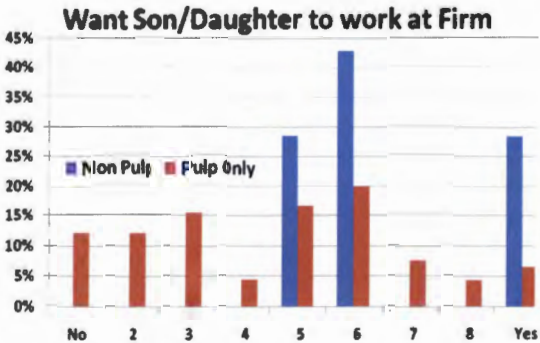


Figure 11: Life Stress



When asked whether they would want their son or daughter to work at the same company they were working for, 44% of pulp respondents were below the neutral point and 39% were above (Figure 12). There were not enough non-pulpers to be significant.

Figure 12: Want Son/Daughter to work at the same company, one day



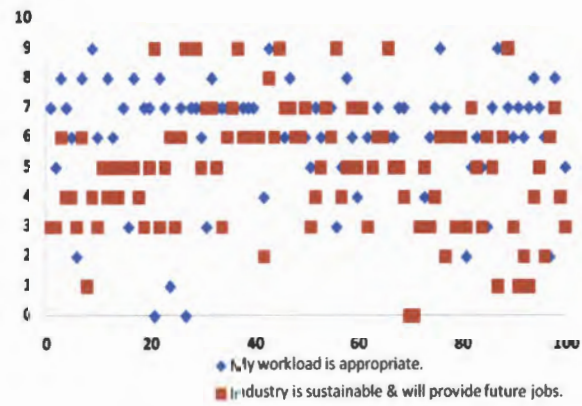
Graphs showing all results from the 29 satisfaction questions are included in appendix B.

### ***Intention to Remain Correlation***

Analysis of the data for correlations between variables stated with examination of linear relationships. The data was scrutinized for possible linear regression modelling.

Plotting of several data sets revealed no significant visible trends. The results from the regression analysis indicated a very high coefficient of variation. For example the COV for “my work load is appropriate” is:

$$\text{COV} = 1.766 / 2.090 = 84\%$$



Charles Spearman’s rank correlation coefficient method was used for analysis of the interval scale data. The independent variables were analyzed against the dependent variable *intention to remain*. The  $r_s$  (rho) correlations, with associated significance are listed below. Significance is noted by; \* = correlation is significant at the 0.05 level (2 tailed) and \*\* = correlation is significant at the 0.01 level (2 tailed).

**Table 5: *Intention to Remain* Correlations**

<u>Independent Variable</u>	<u><math>r_s</math></u>
Q13: "I rank my employer as paying employees other than me appropriately"	0.284 **
Q14. "My employer's human resources practices are modern and progressive."	0.098
Q15. "My company is loyal to its employees."	0.124
Q16. "I am loyal to my company."	0.259**
Q17. "I am paid appropriately."	0.174
Q18. "My employee benefits are appropriate."	0.201*
Q19. "My employee pension plan is appropriate."	0.037
Q20. "My annual bonus is appropriate."	0.109
Q21. "The relationship between my work and pay is appropriate."	0.241*
Q22. "At work I feel part of a team."	0.250**
Q23. "The work group that I am part of has diversity."	0.282**
Q24. "Within my work group I feel I belong."	0.267**
Q25. "My workload is appropriate."	0.257**
Q26. "My work level of challenge is appropriate."	0.268**
Q27. "My work is appropriately meaningful."	0.335**
Q28. "My work hours are appropriately flexible."	0.238*
Q29. "My work environment is suitable."	0.215*

Q30. "My work provides appropriate opportunities for promotion."	0.144
Q31. "My work provides appropriate opportunities for training."	0.160
Q32. "I am treated better than others within my organization."	0.048
Q33. "My job is secure."	0.080
Q34. "The industry I work for is sustainable and will continue to provide jobs in the future."	0.263**
Q35. "In my position at work I am able to influence decision making."	0.056
Q36. "In my position at work I have suitable control over my job assignments."	0.232**
Q37. "In my position at work I have suitable communication with my supervisor."	0.175
Q38. "In my position at work I receive suitable recognition."	0.305**
Q39. "In my position at work I have suitable influence over the company vision and direction."	0.163
Q40. "In my position at work I have support for career advancement from my supervisor."	-0.001
Q41. "In my position at work I have a good relationship with my supervisor."	0.189
Q42. "I would want my son/daughter to work for the same company I do, one day."	0.244*
Q43. "On a scale of 1 to 9, how much stress would there be in your life, where 1 is not stressed at all and 9 is extremely stressed."	-0.153

Other significant correlations between variables are provided in Appendix C. Not surprisingly, long serving employees at mills are more likely to finish their careers at the same firm. On the other hand, there is a correlation indicating that newer employees with a more years left to work are more likely to quit.

Those who saw the HR practices as modern and progressive; are also loyal, happy with pay, and see the employer as loyal. The higher the number of children an employee has, the more loyal they are. There is no significant correlation between the number of children and perceiving the company as loyal.

When asked about workload, those who felt their workload was appropriate also planned to work for many years and felt the pay of others was suitable. There was no correlation between workload and perception of their own pay. Those with more previous jobs recognized that they were able to have influence at work. The same group had less stress in their lives.

In terms of relationships with supervisors, most had good relationships and described good communication. However, those who had worked more years were more likely to report a lack of support for career advancement.

The correlations provide a ranking of each employee retention factor. Both significance and the strength of the correlation are provided. These factors have been broken into intrinsic and extrinsic factors. A statistical analysis of covariance between each set was conducted.

## Linear Regression Covariance

The results were statistically modelled in two groupings. The first grouping was the significant intrinsic factors and the second was significant extrinsic factors. The first model of intrinsic factors generated an adjusted R squared value of 0.273, with high significance (0.000). When the extrinsic factors are added, the new adjusted R square is 0.286. However, the increase of 0.013 is insignificant (sig F = 0.225). See Table 6.

Table 6: Covariance of Intrinsic Factors

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.561 <sup>a</sup>	.315	.273	24.701	.315	7.649	6	100	.000
2	.595 <sup>b</sup>	.354	.286	24.484	.039	1.445	4	96	.225

a. Predictors: (Constant), My workload is appropriate, My work group has diversity, I am loyal to my company, In my position at work I receive

b. Predictors: (Constant), My workload is appropriate, My work group has diversity, I am loyal to my company, In my position at work I receive meaningful, Paying employees other than me appropriately, My work hours are appropriately flexible, Industry is sustainable & will provide f

The second model started with the extrinsic factors and generated an adjusted R squared value of 0.166, with high significance (0.000). Adding in the intrinsic factors generated a new adjusted R square of 0.286. The of 0.120 was significant (Sig F = 0.002). See Table 7.

Table 7: Covariance of Extrinsic Factors

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.444 <sup>a</sup>	.197	.166	24.465	.197	6.272	4	102	.000
2	.595 <sup>b</sup>	.354	.286	24.484	.156	3.863	6	96	.002

a. Predictors: (Constant), Industry is sustainable & will provide future jobs, Paying employees other than me appropriately, My work hours are

b. Predictors: (Constant), Industry is sustainable & will provide future jobs, Paying employees other than me appropriately, My work hours are My work group has diversity, My work level of challenge is appropriate, I am loyal to my company, My workload is appropriate, In my positic

These covariance results indicate the intrinsic factors are more important than the extrinsic factors.



## ***Job Satisfaction, Reasons to Stay and Why Others Quit***

The questionnaire included three ordinal scale questions. A list of eighteen motivation and job satisfaction factors were provided. In the context of each of the three questions, respondents were asked to select and rank the top five. The questions asked:

Q44: Top employee satisfaction factors

Q45: Top reasons for staying

Q46: Top reason why others had quit

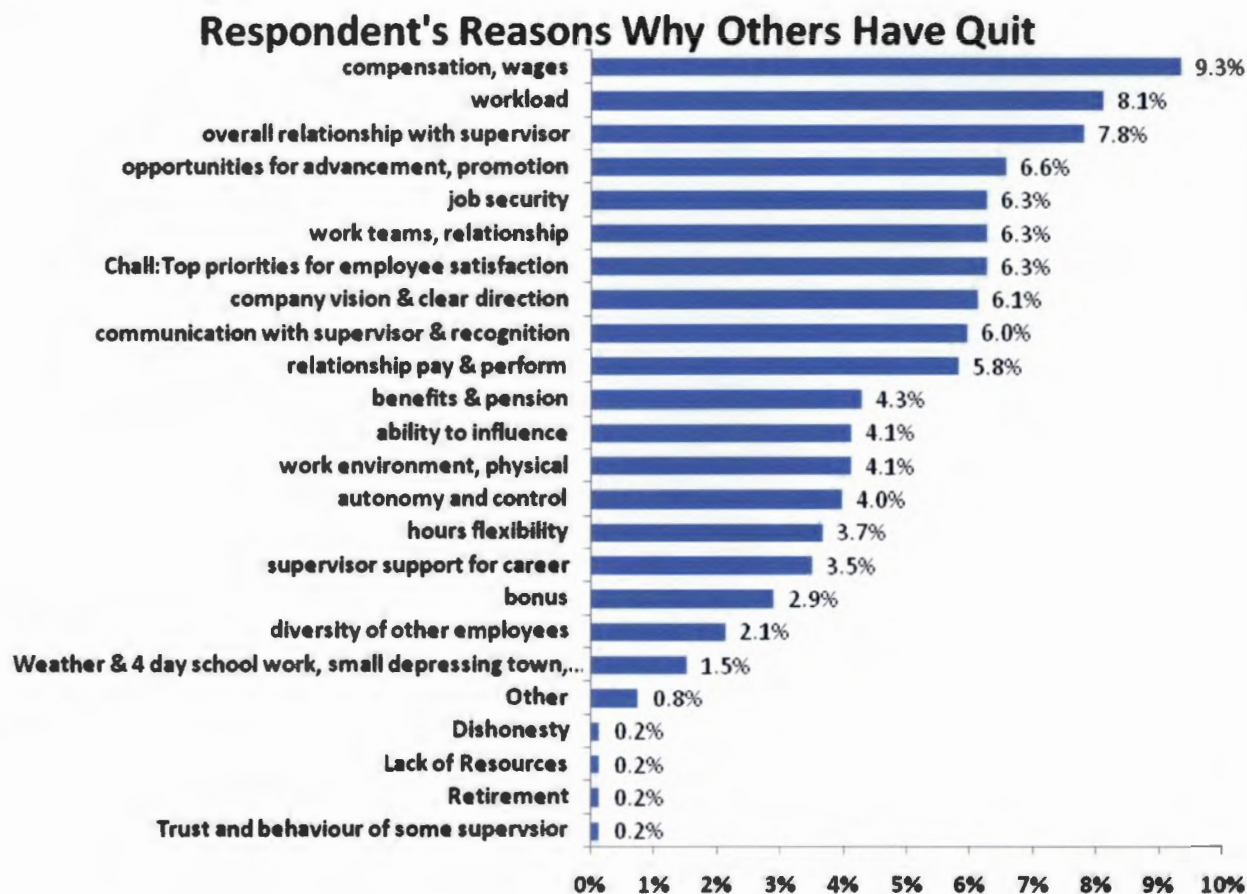
The results were analyzed in two ways. First, weightings were assigned to each response; five points for a top rank, four points for #2, and so fourth. Summing the points for each factor created a weighted ranking. The second method gave each response an equal weight, and then summed the number of responses for each factor. The two methods provide very similar results, which suggests that respondents tended to pick similar factors and then rank them differently. The results are shown in Appendix A (Figure 18).

When asked the top five factors for employee satisfaction and motivation, the top choices were; 1) compensation, 2) benefits & pension, 3) meaningful work, 4) job security and 5) overall relationship with supervisor.

When asked for the top five factors to remain working for the current employer, the top choices were; 1) compensation, 2) benefits and pension, 3) meaningful work, 4) relationship with colleagues and 5) job security.

When asked why other employees had quit in the past, the top five responses were; 1) compensation, 2) workload, 3) overall relationship with supervisor, 4) opportunities for advancement and 5) job security (Figure 13).

Figure 13: Ranking of Respondent's Reasons that Others Had Quit



## **Chapter Five : Results**

Using the results of this research will facilitate accurate changes to the HR system. Clearly identifying the factors and solutions provides focus for HR policy. Successful implementation of those changes is important to improving employee recruitment and retention (Porter, Steers 1996). This requires a visionary and innovative leader, dedicated team members and a clear communications plan. Starting the process is straightforward because existing studies provide examples and practical models. The system can be re-evaluated and modified when needed. As long as the process is in use and employees are engaged, then everyone involved will continue to benefit. The employee engagement cycle is a never-ending process (Figure 14). It must continuously assess and adapt. Without adaptation, the process will die.

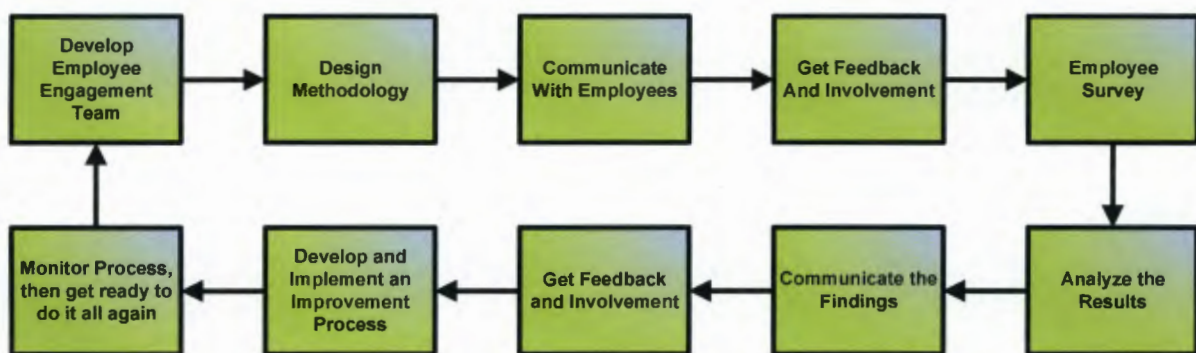


Figure 14: Employee Engagement Cycle

### ***Holistic HR Solutions***

The study and management of employee retention is deep and complex. The solutions are equally complex. There are no quick fixes or simple solutions to creating long-term employee contentment. Rewards, whether intrinsic or extrinsic, will have short-lived effects if the path to receiving them is poorly defined (Herzberg 2008). Short-term improvements will not be sustained without thorough strategies. The solutions must be holistic and planned for long-lived outcomes. Use of questionnaires and survey are formal

methods of gaining data. The more times employees fill them out, the more relaxed they will become filling them out and therefore the results should show less bias. Continuous informal dialogue will provide better understanding on both sides.

Other retention factors that are not part of this paper include internal transfers and absenteeism. An employee may have intent to quit, and then transfer to a new job within the same organization. In such a situation, the company does not record a loss, and may in fact retain an employee who would otherwise have left. Absenteeism is another worker condition that research has shown correlates with turnover (Dalton 1993). HR departments usually monitor absenteeism. Companies that do not have policies to control absenteeism, end up with more absenteeism. As do companies that pay well, since employees can afford time off. Similarly, companies who do not compensate for unused sick days experience higher turnover. An assessment of any employee attitudes must carefully consider secondary factors.

The entire morale of an organization is interwoven. When one employee quits it has an effect on other employees (Mobley 1977). Regardless of the retention strategy, it must include a communications plan. The employees left after a colleague quits need information to understand how their co-worker was treated and how the companies "feels". Otherwise, they will create their own reasons. The results from the questionnaire indicate that employee's attitudes toward work are different from their assessment of reasons others have quit. They ranked workload 10<sup>th</sup>, yet they ranked it 3<sup>rd</sup> for reasons why others had left. This may be due to different circumstances, or it may be due lack of information about the departures.

HR departments and supervisors can counsel the remaining employees. When a colleague leaves, we often experience the loss in a negative way. Counselling, through a supervisor or HR, is a reasonable approach, since it provides an opportunity for the employees to express their thoughts and ask for clarification on issues where they may have strong feelings.



HR departments should provide supervisors with the details and training on how to communicate with employees.

### ***Compensation and Benefits***

The results of the survey indicate that pay is the most important factor for job satisfaction and has a high correlation to employee *intention to remain*. This was a very surprising result. The vast majority of studies do not indicate pay as a top motivator or a factor in job satisfaction (Rynes, Gerhart and Minette 2004). Since pay rates are established in pulp mills, they were not expected to score highly in the questionnaire. Instead the intrinsic factors were expected to be a dominate choice. Regardless of the results, increasing pay is not the single factor that will decide an employee's *intention to remain*, since there is little that pulp mills can do about most pay rates.

Prior research does not support pay as a top factor. Much of that research focussed on health care, government and educational institutions. It is possible that those work environments value intrinsic rewards higher than pulp mills. Pulp mills are certainly dirtier and rougher than hospitals. The workers may be hardier and have few expectations for the "soft" rewards.

Pay rates for unionized workers within the pulp mill are fixed by the contract and can only be changed through renegotiation of the contract. The skilled rates are below other industries and the unskilled rates are above others. The only rates that management can quickly adjust are those of the non-unionized employees. Coincidentally, the non-unionized staff turnover is significantly higher than the hourly. Strategies are required. To discourage new hires from leaving too quickly, a time triggered compensation feature could be used. Use of a time triggered bonus or lump sump payout that would not become active until the employee has worked for a specific period is an option. Another alternative compensation option is inclusion into the pension plan only after a specified period.



Since employee turnover is costly due to the loss of the site-specific experience the employee has gained, it becomes more costly to lose long-term employees. A low entry wage with a commitment for increases on an established scale could be used to avoid high costs of early turnovers. The increasing scale would have to match the wages lost during the initial period. More research would be required to determine whether early quits are a significant factor. Otherwise, the low initial wage may have a negative effect on hiring. This is an unusual compensation method in the pulp industry and significant research is required prior to implementing.

A very interesting paper on job satisfaction and compensation, attempts to quantify how much job satisfaction can be bought (Helliwell & Huang 2005). The paper compares various studies, which measure and rank, satisfaction and pay. Creating a 10-point scale for satisfaction, a relationship is built between the amount of money required to move a person along the happiness scale. Although the conclusion is not a priori, it suggests that a \$10,000 raise for a \$50,000 per year breadwinner would lift them one full point of the 10-point scale of happiness.

### ***Intrinsic versus Extrinsic***

The money centric results from the questionnaire were not expected. Certainly, the philosophical question on job satisfaction seeks a higher value than pay, from an individual's work. The *hierarchy of needs* clearly outlines that once the base needs are satisfied then higher levels of rewards are sought. It should follow that pulp mill workers who are receiving above average wages will look for more intrinsic rewards.

Other recent research shows that having money does not buy happiness. A recent study shows that spending money on others promotes happiness in the spender (Dunn, Aknin and Norton 2008). However, in this *employee retention* survey, the respondents disagreed and

that money is the primary driver. Regardless, money is one factor and there are many other factors.

The data are split into intrinsic and extrinsic factors. Each group is ranked in descending order of the correlation between "*intention to remain*" at the top.

Table 8: Ranking of Intrinsic Factors

	$r_s$
1. My work is appropriately meaningful.	0.335**
2. In my position at work I receive suitable recognition.	0.305**
3. The work group that I am part of has diversity.	0.282**
4. My work level of challenge is appropriate.	0.268**
5. Within my work group I feel I belong.	0.267**
6. I am loyal to my company.	0.259**
7. My workload is appropriate.	0.257**
8. At work I feel part of a team.	0.250**
9. I would want my son/daughter to work for the same company I do, one day.	0.244*
10. In my position at work I have suitable control over my job assignments.	0.232**
11. In my position at work I have a good relationship with my supervisor.	0.189
12. In my position at work I have suitable communication with my supervisor.	0.175
13. In my position at work I have suitable influence over the company vision and direction.	0.163

14. My company is loyal to its employees.	0.124
15. My employer's human resources practices are modern and progressive.	0.098
16. In my position at work I am able to influence decision making.	0.056
17. I am treated better than others within my organization.	0.048
18. In my position at work I have support for career advancement from my supervisor."	-0.001
19. On a scale of 1 to 9, how much stress would is there in your life, where 1 is not stressed at all and 9 is extremely stressed."	-0.153

Table 9: Ranking of Extrinsic Factors

	$r_s$
1. I rank my employer as paying employees other than me appropriately	0.284 **
2. The industry I work for is sustainable and will continue to provide jobs in the future.	0.263**
3. The relationship between my work and pay is appropriate.	0.241*
4. My work hours are appropriately flexible.	0.238*
5. My work environment is suitable.	0.215*
6. My employee benefits are appropriate.	0.201*
7. I am paid appropriately.	0.174
8. My work provides appropriate opportunities for training.	0.160
9. My work provides appropriate opportunities for promotion.	0.144
10. My annual bonus is appropriate.	0.109

11. My job is secure.	0.080
12. My employee pension plan is appropriate.	0.037

These data provide management with an appreciation of employee perceptions. The extrinsic factors are not unfamiliar, but the data provides some interesting insights. The highest correlations come from perceptions of others and the industry. Employees are more likely to remain if they recognize others as well compensated. It is interesting that both job security and pension plan are much further down. This may be due to the lack of control over employees have over these items.

The intrinsic factors are more accessible from a management perspective. The desire to do meaningful work and to be recognized for it, are on top of the list. They have twice the correlation of being paid appropriately. Similarly, if the supervisor is able to reduce stress and provide opportunities for advancement the employee is more likely to stay.

## ***Hiring***

A simple solution to retention is hiring employees who will stay. Statistics Canada occupational skills survey provides insights into the staffing requirements within each industry and skill intensity by region. The results show, manufacturers, like pulp mills, require more intermediate skilled workers and fewer technical and professional people than sectors such as construction or business services. These intermediate workers have skills, knowledge, and abilities somewhere between those who are technically educated and those who enter a job unskilled. The intermediates may not have formal technical training, such a trade or certification, but they do have technical skills and knowledge. In many cases, they are able to learn on the job the skills that others were formally taught. For



employers, this presents an opportunity to hire unskilled workers and create efficient training programs. Unskilled workers are easier to come by, and training is a recognized extrinsic reward.

Comfort with the local weather and amenities, combined with whether the spouse was happy at the location were described as a reasons to leave. These questions were not specifically posed, however Q46 asked why others had left and number of respondents entered weather, location or spousal discontent in the “other” answer box. The HRM group also mentioned this as reason that some newly hired middle managers had left after only a few years. Middle managers are some of the most important employees in a business. Often they are where the rubber meets the road. They turn management policy into action, and tremendous influence on employee motivation and perceptions. Pulp mills are seeing retirements and quits from this important group.

The middle management group is also highly marketable. Their skills and energy get to roles of responsibility. With increased responsibility, they gain new experiences and confidence. These experiences improve their marketability and they can easily move to another job. If it is with another company, then the first firm has a tremendous lost investment. The receiving company must offer them something more desirable. Therefore, HR departments need to put their firms in the latter position.

When mills advertise for employment opportunities, they receive applications from local and out of town candidates. Employees hired from out of town are similar to expatriates working abroad. When workers travel to foreign countries, the employers have to consider different HR strategies. The top five reasons expatriate managers fail in new assignments are; 1) inability for spouse to adjust, 2) managers ability to adjust, 3) other family problems, 4) manager’s personal or emotional maturity, and 5) inability to cope with new responsibilities (Hill 2006). These factors must be considered when hiring employees from outside the region. The spousal commitment scored as the highest factor. However, spouses are very, very rarely part of the interview process. Informal meetings or a dinner



with the prospective couple is a casual way to get to know the spouse. Once the hiring is completed, the firm can provide follow-ups to ensure the needs of the spouse are being addressed. Putting the spouse in contact with community groups will help. Establishing a routine is important when in any new situation. Understanding the importance of the spouse in a hiring situation must be part of the hiring process.

### ***Supervision: the Relationship and Advocacy***

Recognizing intrinsic factors that improve employee retention was a hypothesis of this paper. Improving an employee's inner welling being through work place relationships and appreciation were theories supported by meta analysis. The results are different. Employees scored compensation, wages and workload as the most important factors other employees had quit. However, below the surface there are several important intrinsic factors.

Respondents scored "having a good relationship with the supervisor", the highest. On the satisfaction index, the top six factors are intrinsic and the supervisor's role ranks highly. On the other hand, they did not perceive their supervisor as providing them with an opportunity for advancement or training. In fact, level of stress and job security scored better than those two factors.

A disconnect between relationship and advocacy suggests unclear communication. There may be good access and frequent dialogue, but the worker's interests are not receiving adequate attention. The correlations indicate the top factors to improve intention to remain are; 1) work is meaningful, 2) recognition, 3) group diversity, 4) challenge and 5) feel I belong. Relationship with the supervisor does have a positive correlation, but it is well down the list and has only half the correlation of the top correlated factors.

However, meaning and recognition are also supervisor functions. To gain better value from the supervisor to employee communication, a formal process is required. The process for supervisors to begin subordinate development starts with proper performance appraisals.

Supervisors have propinquity with their workers, which affords an uncommon opportunity to build a relationship. That relationship enables the supervisors to understand both the ability and attitudes of subordinates. The results provide many opportunities, in the form of factors, to improve employee intention to remain.

Supervisors must explain the value of the work done and then provide recognition for work well done. Practical motivation theory provides many tools to achieve these goals.

Including a “reason why” a task is requested, or talking about the job with those who requested the work, will begin to provide meaning. In addition, workers want to know why they were asked and not someone else. Feeling special is part of the meaning and recognition solution. During the job, and when it is completed, the supervisor should inspect and comment on the effort. Timely and relevant feedback is crucial.

Not all employees will stay. Some employees leave because of issues outside the workplace. Most companies have employee assistance programs that provide employees with structured guidance through personal, financial or health difficulties. These problems may range from job stress to drug addiction (Masi 1992). These programs are either part of a firm’s HR department or contracted to an EAP provider. Although the programs are confidential and most often voluntary, most frequently an employee must initiate the EAP process. These are passive programs and do not provide proactive solutions to employee needs. Programs that find and help employees, who need assistance, will reduce their stress and provide intrinsic value.

## ***Retention Model***

An employee retention model would use data and HR theory to create a focused strategy for improved employee retention. The data from this paper identifies and ranks the employee retention factors. The model should also include a review of past turnover, assess recruiting and a forecast of future turnover.

A formal performance appraisal system includes individual interviews. A confidential survey could be deployed as well. The survey would investigate satisfaction and retention issues. Based on the results of the appraisal and survey, the HRM strategy would be constantly modified to meet changing needs.

Retention of human capital should be considered as important as the maintenance of capital assets. Safety and environmental compliance are top priorities for industrial companies. Both have high financial consequences for non-conformance, so companies invest in programs to sustain good performance. Similar strategies and efforts are required for employee retention and motivation.

## **Chapter Six: Conclusions**

Canada's economy is changing and the once dominate forestry resource sector is in decline. Pulp and paper mills are complex facilities, which required motivated and skilled labour to remain globally competitive. Employee turnover is an issue and strategies for improving retention are required.

Cross sectional survey data from a mill indicate that employees want to be well paid, but they also want meaning and relationships from work. Employees indicate that others have quit because of wages, workload and their relationship with their supervisor.

Compensation for staff is negotiable, whereas pay for the unionized work force is defined by a collective agreement. There are several other intrinsic factors, which rank highly and correlate to employee *retention to remain, ITR*.

Within the ITR correlations, the top intrinsic factors are; 1) meaningful work [0.335\*\*], 2) recognition [0.305\*\*], 3) diversity [0.282\*\*], 4) challenge [0.268\*\*], and 5) feel I belong [0.259\*\*].

Within the ITR correlations, the top extrinsic factors are; 1) others paid well [0.284\*\*], 2) industry is sustainable [0.263\*\*], 3) work hours flexible [0.238\*], 4) relationship between work and pay is appropriate [0.241\*], and 5) work environment is suitable [0.215\*].

The implications of the paper provide opportunities for productivity savings. A trades or technical person making \$80,000 per year costs \$200,000 to replace. The costs include recruiting and retraining costs, and do not include the lost experience or effect on overall moral. If a plant with 500 employees is experiencing a 3% turnover rate, that equates to 15 employees per year. Using the tradesman's rate, the company cost is \$3,000,000 per year to replace the lost employees. A departing long term employee takes experiential knowledge with them. That is knowledge that can only be gained through lengthy service and familiarity with the equipment. Improved retention has positive financial impact.

### ***Changes to Pulp Mill HRM Strategies***

Adaptation is the path to survival. Pulp mills must strive to change the perception of a dirty industry in decline. The new paradigm should be inclusive and modern. Changes to worker perception can be measured in terms of job satisfaction and the reduction in employment turnover costs. Happy employees would be expected to be more productive employees.

Using the data from this paper, focused HRM strategies can be developed to reduce turnover. These support the long-term goals of better retention, improved morale and increased productivity. Application of the results is an entire project in itself.

### ***Practical Implications***

As a practical application of the data, firms must recognize that certain factors are more significant than others are. HR policies may not put priority on the factors that are most important to retain employees. The data provide a satisfaction index, correlations and covariance to employee *intention to remain*. An effective retention model puts the highest priority on the factors most related to employee retention.

Although pay scored highest on the satisfaction index, the intrinsic factors had both higher correlations and covariance. In particular supervisors should realize that workers want work that is meaningful and to receive recognition for their effort. The supervisors need help implementing the right policies.

HRM strategies must develop the retention model based on the most effective factors. Then HR department must provide training for supervisors in the application of the data. The HR strategy and training would encompass:



1. Motivation theory
2. Job Satisfaction theory
3. Employee engagement interviews
4. Employee development plans based on the interviews and employee retention factors.

A practical application would start with development of a training syllabus. The HR group would develop and deploy the program. It would start with two one hour sessions. The first session would explain motivation and the second job satisfaction theory. It would provide background on the history and evolution of those theories. Since many supervisors will have come through the traditional pulp mill succession model, they would be familiar with Theory X. They would benefit from exposure to new theories and to understand the key factors involved in employee retention.

The next stage of the program is employee engagement. A structured employee evaluation process establishes expectations of the employee and the supervisor. Through structured dialogue, they can assess their perceptions of each other and define future goals. Achievement of those goals may require additional resources, such as courses or skill opportunities. This process continues beyond the structured evaluation, and includes regular dialogue. The supervisor needs to provide appropriate meaning and recognition.

The final stage is the establishment of the employee's intention to remain and the company's response. Use of PPIERS could be implemented here. Some employees will want to leave and they should be encouraged to do so. Others will define their perceived shortcomings of their jobs and the firm has an opportunity to intervene.

## ***Opportunities for further research***

There are several follow up opportunities. This retention model is an entire project on its own. Using this paper and noted references, a very comprehensive model could be developed. Part of that project, or of a subsequent project, would be the implementation of the model. A final stage, or follow up, would be evaluation of the implemented model. However, the model should include key performance indicators providing a score card for the program.

Findings and problems with the paper are really opportunities for better work next time. Using the findings and with the abundance of research on retention and job satisfaction, a more efficient core question set can be developed. If an HR department was to conduct a survey on a regular basis, the format should be about 10 minutes long. A thorough review of the questions would improve wording and combine some questions, so the factors set is more compact. Some questions may require modification, like a change from "Is my pay appropriate" to "would more pay make you less likely to leave?" Add some questions. For example, "Do you have the tools to get your job done?" In addition "how important is your spouse when deciding whether to leave a job".

Further studies should be conducted on a wider selection of mills, industries and employers. This paper provides picture of a particular mill in northern British Columbia, which may have unique issues.

*The changing economics of forestry in BC and the employment climate warrant studies on the viability of our pulp industry. If the industry decline is to stop, changes are required. This paper provides some data and analysis on employee retention. Human capital is an important part of high capital industry and retention must be a high priority.*

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## Attachment

### *Appendix A- Questionnaire Data and Results*

Figure 15: Distribution of Children's Ages

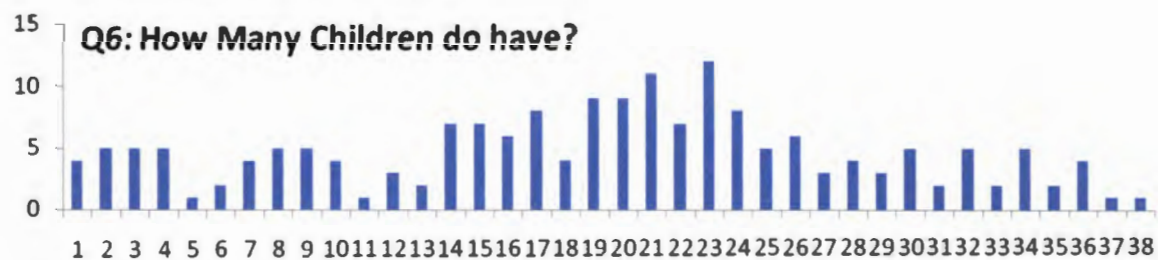


Figure 16: What Type of Company do you work For?

**Q7: What type of company do you work for?**

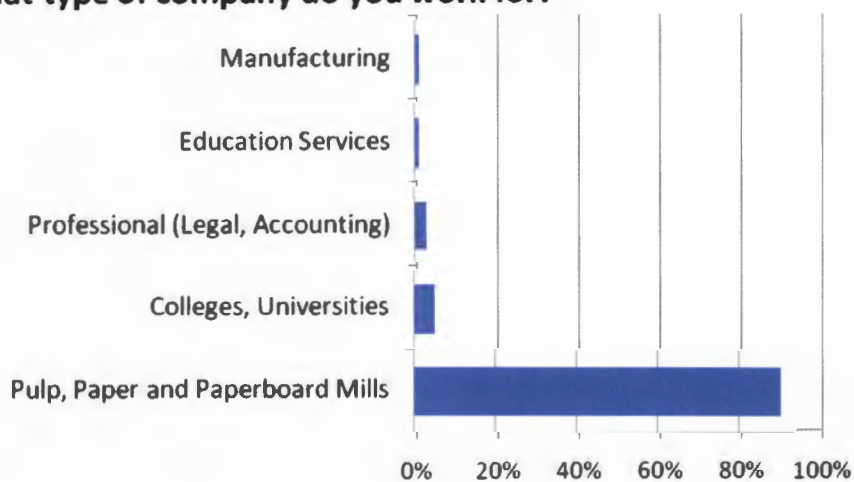


Figure 17: Respondent Job Types

**Q8: What Type of Job Do You Have?**

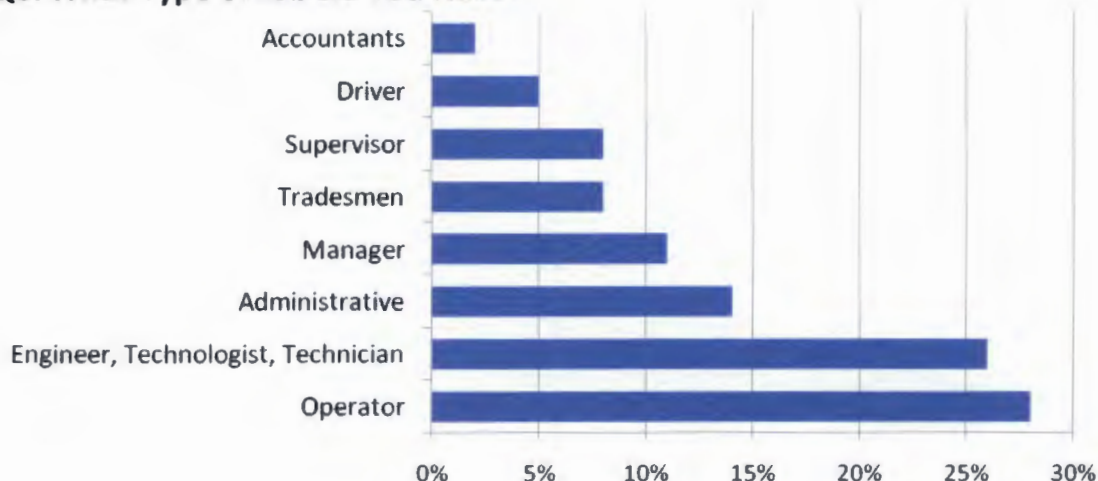


Figure 18: Respondents Top Priorities for Employee Satisfaction

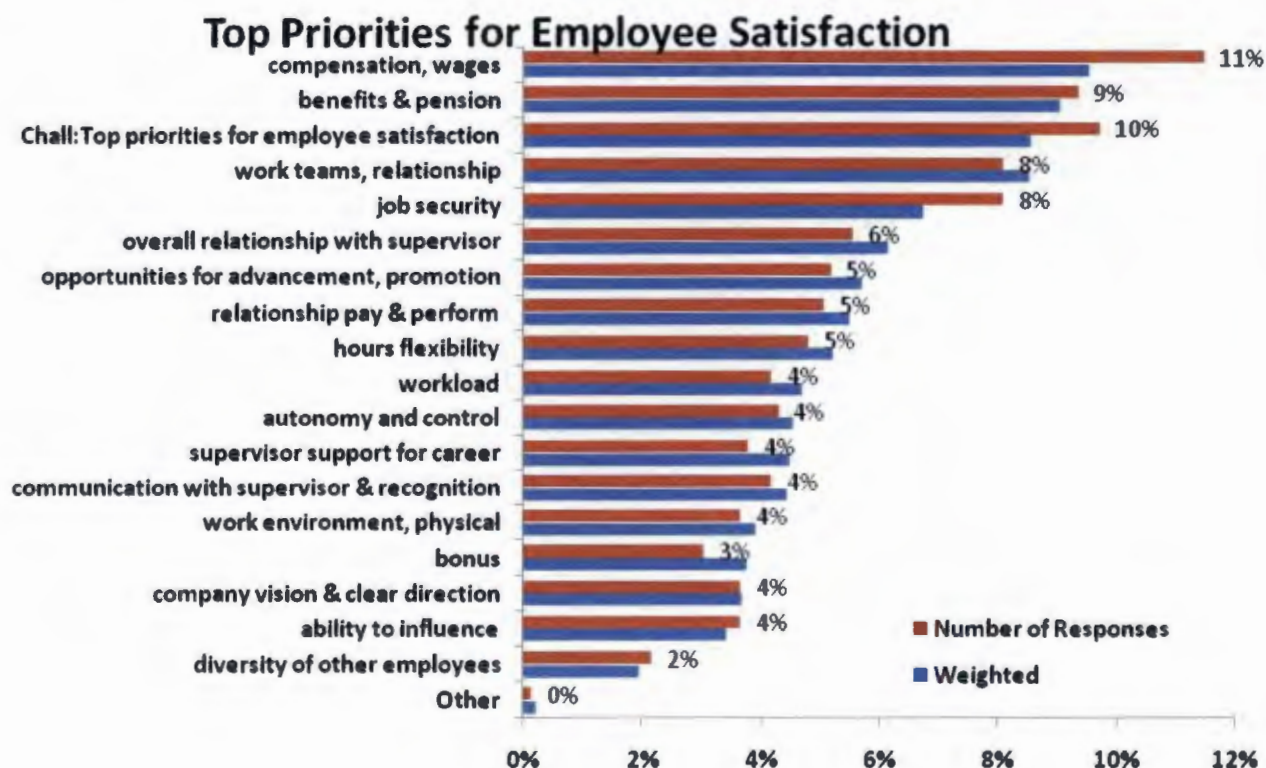
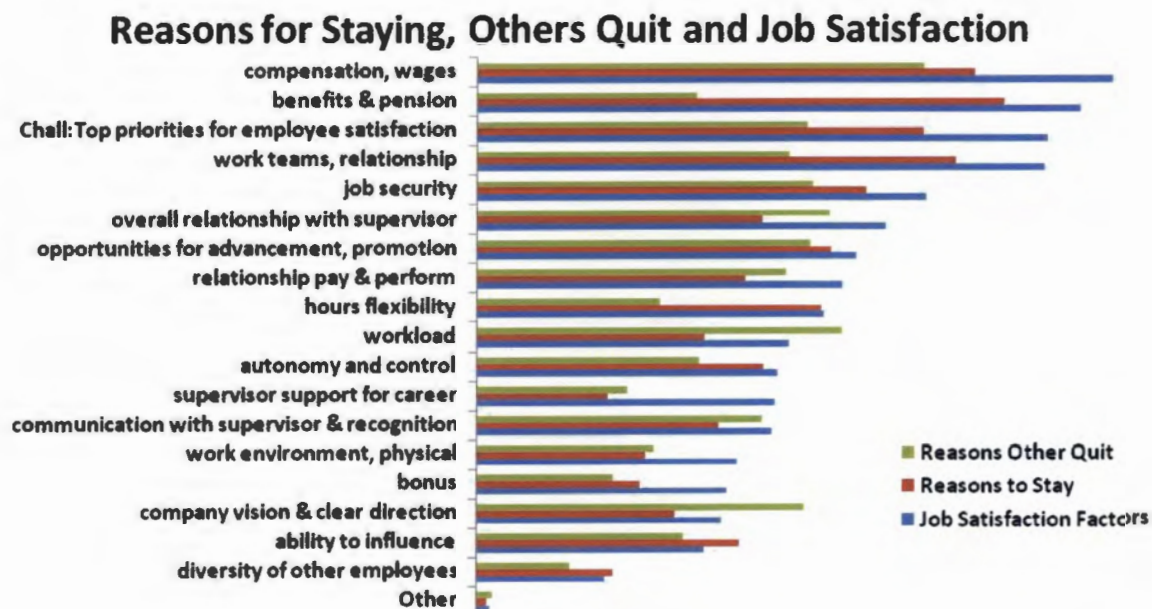
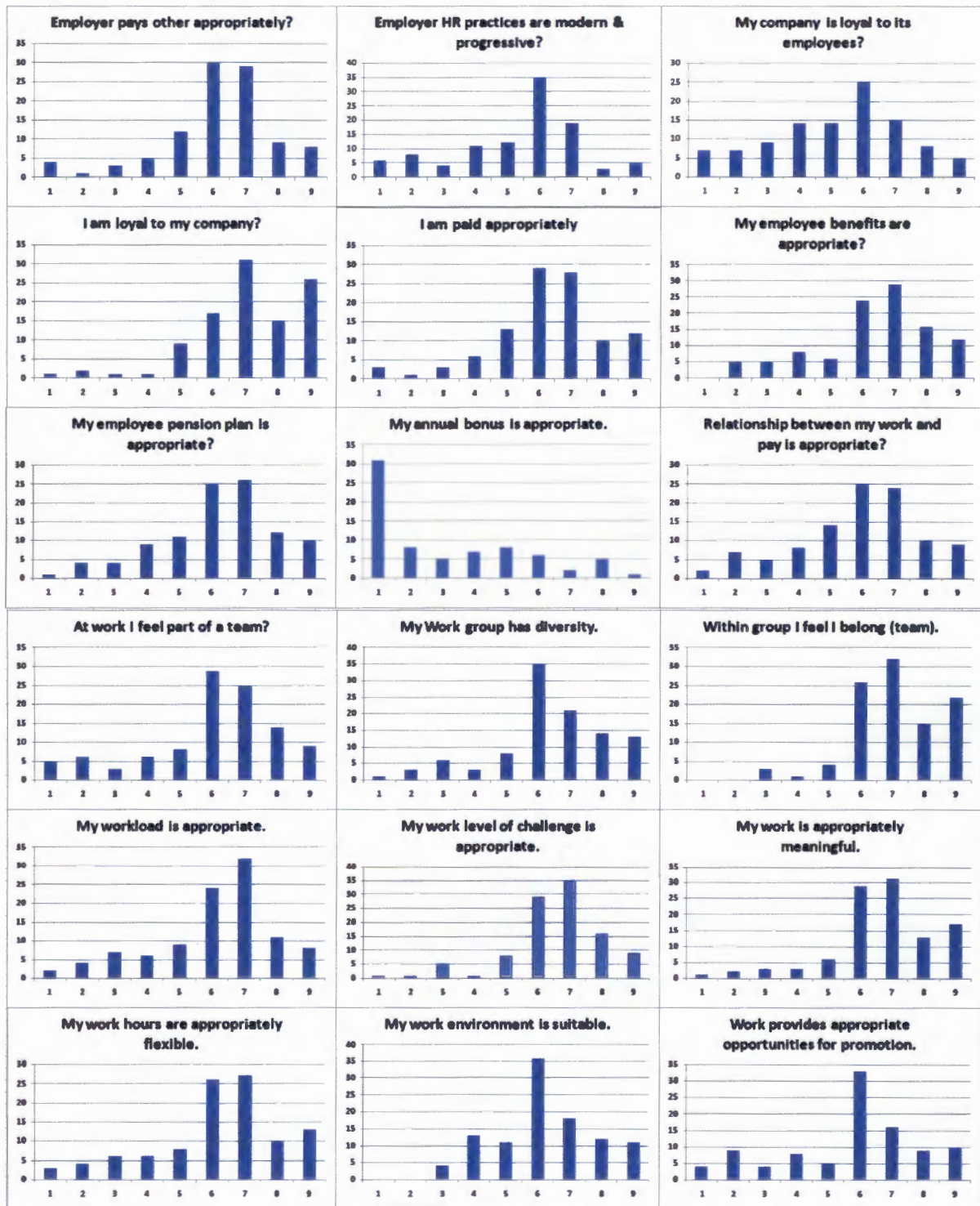


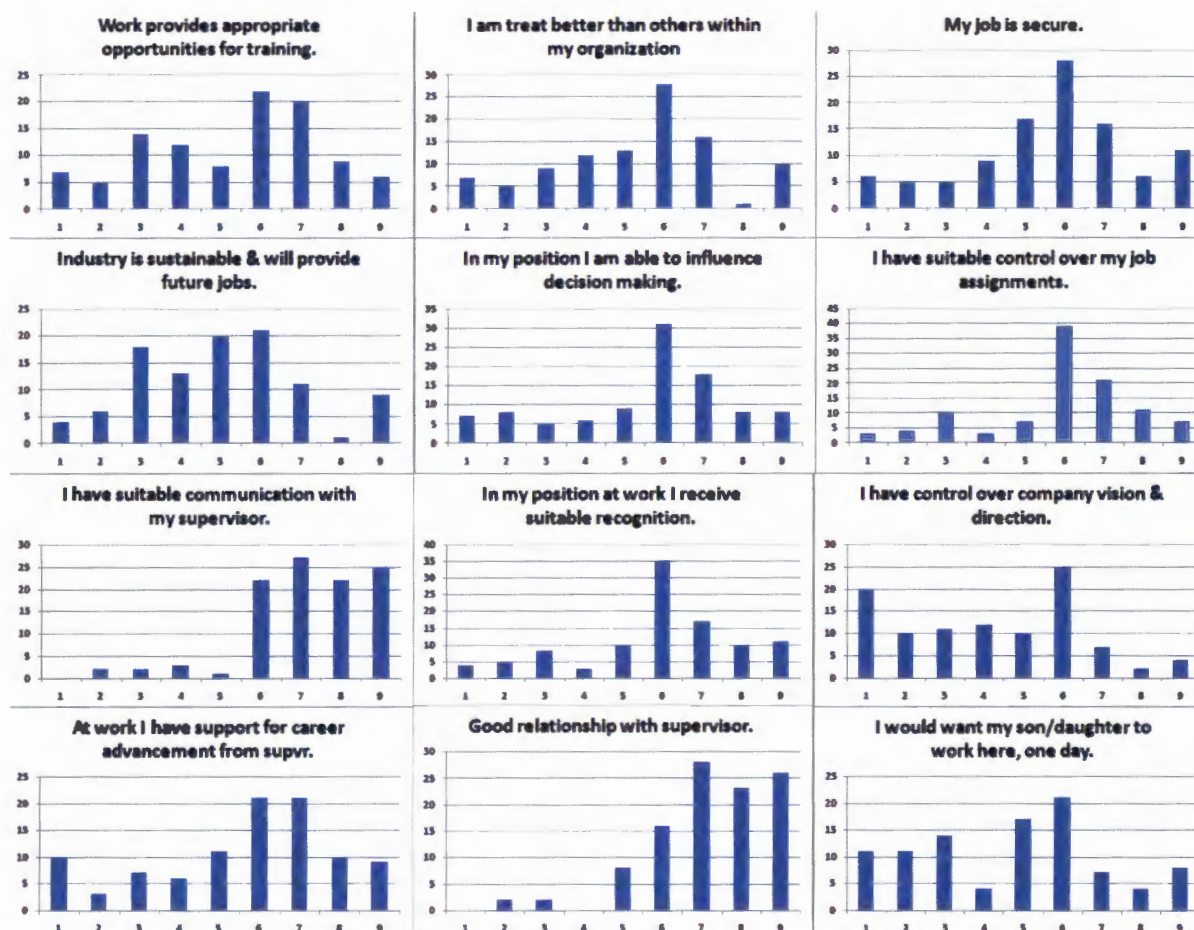


Figure 19: Rank of Reasons others quit, respondent would stay and job satisfaction



## Appendix B – Satisfaction Question Results





## Appendix C – Complete Correlation Coefficients

Spearman's rho correlation coefficient to dependent variable "percent of working life planned with current employer". [\*\* significant at the 0.01 level (2 tailed), \* significant at the level 0.05 (2 tailed).

Paying Employees other than me appropriately	0.284** + 0.003
Employer HR practices are modern & progressive	0.098 + 0.315
My company is loyal to its employees	0.124 + 0.203
I am loyal to my company	0.259** + 0.007
I am paid appropriately	0.174 + 0.074
My employee benefits are appropriate	0.201* + 0.038
My employee pension plan is appropriate	0.037 + 0.703
My annual bonus is appropriate	0.109 + 0.262
Relationship between my work and pay is appropriate	0.241* + 0.012
At work I feel part of a team	0.250** + 0.010
My work group has diversity	0.282** + 0.003



Within my group I feel I belong	0.267** + 0.006
My workload is appropriate	0.257** + 0.007
My work level of challenge is appropriate	0.268** + 0.005
My work is appropriately meaningful	0.335** + 0.000
My work hours are appropriately flexible	0.238* + 0.014
My work environment is suitable	0.215* + 0.026
Work provides appropriate opportunities for promotion	0.144 + 0.138
Work provides appropriate opportunities for training	0.160 + 0.099
I am treated better than others	0.048 + 0.625
My job is secure	0.080 + 0.413
Industry is sustainable & will provide future jobs	0.263** + 0.006
In my position I am able to influence decision making	0.056 + 0.564
I have suitable control over my job assignments	0.232* + 0.016
I have suitable communication with my supervisor	0.175 + 0.071
In my position at work I receive suitable recognition	0.305** + 0.001
I have control over company vision and direction	0.163 + 0.093
Support for career advancement from my supervisor	-.001 + 0.991
Good relationship with supervisor	0.189 + 0.052
I would want my son/daughter to work here one day	0.244* + 0.012
Level of life stress	-.153 + 0.115
I am comfortable with my company's environmental impact	0.010 + 0.921
If you could do it again, would you choose to work here?	0.007 + 0.942
I would recommend my job to others	0.153 + 0.116

#### ***Appendix D – Other Significant Correlations between Variables***

Dependent Variable	Correlation to:	Significance
Male or Female (1-2)	How many full time jobs have you had	0.198+0.044
Age Category	Years worked for your current employer	0.694+0.000
	How many years worked for current employer?	-.329+0.001
	Years left to work?	-.647+0.000
	Working years remaining not with current?	-.256+0.009
	% of remaining working life planned to stay with current employer	0.322+0.001
Age Group (<35, >35)	Years worked for your current employer	0.640+0.000
	How many years worked for current employer?	-.249+0.011
	Years left to work?	-.607+0.000
		-.287+0.003



	Working years remaining not with current? % of remaining working life planned to stay with current employer	0.314+0.001
Marital Status	Years worked for your current employer	0.231+0.018
How many children do you have?	Years worked for your current employer	0.257+0.009
How many full time jobs have had?	If an employee was leaving what should the company do?	0.221+0.024
Years left to work	Years worked for your current employer	-.538+0.000
Number years worked with current employer	Years worked for your current employer	-.250+0.011
	How many years worked for current employer?	-.195+0.048
	Years left to work?	-.538+0.000
	Working years remaining not with current?	-.250+0.000
Years left to work	How many years worked for current employer?	0.609+0.000
	Working years remaining not with current?	0.438+0.000
Working years not work current	How many years worked for current employer?	-.313+0.001
	Years left to work?	0.438+0.000
	My company pays employees other than me appropriately	-.924+0.000
		-.201+0.42
Company Pays employees other than me appropriately	Working years remaining not with current?	-.201+0.042
	% of remaining working life planned to stay with current employer	0.284+0.003
	HR Practices are modern and progressive.	0.396+0.000
	My company is loyal to employees.	0.390+0.000
	I am loyal to my company.	0.309+0.001
	I am paid appropriately.	0.727+0.000
	My employee benefits are appropriate.	0.550+0.000
	My employee pension plan appropriate.	0.504+0.000
	Relationship between work & pay is appropriate	0.679+0.000
HR Practices are modern and progressive.	My company is loyal to employees.	0.663+0.000
	I am loyal to my company.	0.346+0.000
	I am paid appropriately.	0.515+0.000
	My employee benefits are appropriate.	0.435+0.000
	My employee pension plan appropriate.	0.401+0.000
	Relationship between work & pay is appropriate	0.526+0.000
My company is loyal to employees.	HR Practices are modern and progressive.	0.663+0.000
	I am loyal to my company.	0.468+0.000
	I am paid appropriately.	0.511+0.000

	My employee benefits are appropriate. My employee pension plan appropriate. Relationship between work & pay is appropriate	0.454+0.000 0.462+0.000 0.476+0.000
I am Loyal to my company:	How many children do you have? Years worked for your current employer % of remaining working life planned to stay with current employer I am paid appropriately. My employee benefits are appropriate. My employee pension plan appropriate. Relationship between work & pay is appropriate	0.471+0.000 0.289+0.003 0.259+0.007  0.357+0.000 0.406+0.000 0.256+0.009 0.382+0.000
I am paid appropriately	My company pays employees other than me appropriately My employee benefits are appropriate. My employee pension plan appropriate. Relationship between work & pay is appropriate	0.727+0.000  0.609+0.000 0.534+0.000 0.810+0.000
My employee benefits are appropriate	Type of company you work for My company pays employees other than me appropriately My employee pension plan appropriate. Relationship between work & pay is appropriate	0.224+0.022 0.550+0.000  0.773+0.000 0.591+0.000
My employee pension plan is appropriate	Type of company you work for My company pays employees other than me appropriately Relationship between work & pay is appropriate	0.271+0.005 0.504+0.000 0.546+0.000
My annual bonus is appropriate	How many full time jobs have you had?	0.246+0.012
Relationship between my work and pay is appropriate:	How many Children? % of remaining working life planned to stay with current employer My company pays employees other than me appropriately	0.212+0.033 0.241+0.012  0.679+0.000
I feel part of a team	My company pays employees other than me appropriately	0.261+0.007
Group has diversity	How many full times jobs have you had? % of remaining working life planned to stay with current employer My company pays employees other than me	0.284+0.003 0.282+0.003 0.229+0.020

	appropriately	
Within group I feel part of a team	How many Children? My company pays employees other than me appropriately	0.234+0.018 0.363+0.000
My workload is appropriate	How many Children? How many years to work for current? My company pays employees other than me appropriately	0.231+0.020 0.234+0.017 0.403+0.000
My work challenge is appropriate	How many Children? My company pays employees other than me appropriately	0.218+0.028 0.249+0.011
My work is appropriately meaningful	How many Children? Years worked for your current employer Years left to work? Working years remaining not with current? My company pays employees other than me appropriately	0.354+0.000 0.298+0.002 -.262+0.008 -.263+0.007 0.326+0.001
My work hours are flexible	Working years remaining not with current? My company pays employees other than me appropriately	-.198+0.045 0.279+0.004
My work environment is suitable	My company pays employees other than me appropriately	0.404+0.000
Industry is sustainable & will provide future jobs	Years worked for your current employer	0.217+0.027
Able to influence decision making	How many full times jobs have you had?	0.201+0.041
I have suitable control over my job assignments	How many Children? Years worked for your current employer	0.233+0.019 0.194+0.048
In my position at work I receive suitable recognition	Type of company worked for?	0.201+0.041
I have control over company vision and direction	How many Children?	0.212+0.033
I have support for career advancement from supervisor	Years worked for your current employer	-.294+0.002
I would want my son/daughter to work here one day.	How many Children? Years worked for your current employer	0.333+0.001 0.213+0.031
Level of life stress	How many full times jobs have you had?	0.199+0.043

***Appendix E - Pulp and Paper Employee Intention to Remain Survey,  
PPEIRS Questions***

Location: \_\_\_\_\_ (city) \_\_\_\_\_ (province)

**Q1. "Would you be interested in answering several questions about employee retention?" (circle one)**

- 1 Yes 2 No

Q2. "Male or Female?" (circle one)

- 1 Male 2 Female

**Q3. "From the following five categories, what age category would you fit into?"**  
(circle one)

- |   |                                       |
|---|---------------------------------------|
| 1 | Under 25                              |
| 2 | Between 25 and 34, includes 25 and 34 |
| 3 | Between 35 and 44, includes 35 and 44 |
| 4 | Between 45 and 54, includes 45 and 54 |
| 5 | 55 or older                           |
| 6 | Not applicable                        |

**Q4. "What is your marital status?"**

- 1 Single, Never married
- 2 Single, previously married
- 3 Separated
- 4 Married
- 5 Not applicable

**Q5. "How many children do you have?"**

Number of children: \_\_\_\_\_ If no children goto question Q7.  
X Not applicable



**Q6. "What are the ages of your children?"**

Child 1	2	3	4	5	6
Age: _____	_____	_____	_____	_____	_____

Leave blank where there are no children.

X: Not applicable.

**Q7. "Using the choices provided, describe the type of company you work for."**  
(circle one)

- 11 Agriculture
- 113 Forestry and Logging
- 114 Fishing or Hunting
- 211 Oil and Gas
- 212 Mining
- 22 Utilities, Power or Natural Gas distribution
- 23 Construction
- 31 Manufacturing
- 3211 Sawmills
- 3221 Pulp, Paper and Paperboard Mills
- 331 Primary metal manufacturing
- 332 Fabrication metal products
- 42 Wholesale Trade or distributor
- 44 Retail Trade
- 48 Transportation and Warehousing
- 51 Information (Telecom, Publisher) and Cultural Industries
- 52 Financial and Insurance
- 53 Real Estate, Rentals and Leasing
- 54 Professional (Legal, Accounting), Scientific or Technical Services
- 55 Management of Companies and Enterprises
- 56 Administrative and Support, Waste Management
- 61 Education Services
- 6113 Colleges, Universities
- 62 Health Care and Social Assistance
- 71 Arts, Entertainment and Recreation
- 72 Accommodation & Food Services
- 81 Other \_\_\_\_\_
- 92 Public Administration and Government
- X Not applicable

**Q8. "From the list below, what type of job do you have?"**

- 1 Accountant, Auditor
- 2 Administrative
- 3 Carpenter
- 4 Counsellor, Psychologist
- 5 Driver
- 6 Enforcement (Police, Fish & Wildlife, ), Fire Protection
- 7 Engineer, Technologist, Technician, Biologist
- 8 Food Services Worker (Chef, Cook, Baker, Waiter)
- 9 Lawyer, Paralegal
- 10 Manager
- 11 Medical professional (doctor, nurse, dietician)
- 12 Operator
- 13 Researcher (Scientific, Data, Library, Analyst)
- 14 Supervisor
- 15 Teacher, Professor, Instructor
- 16 Tradesman
- 17 Unskilled labourer
- X Other \_\_\_\_\_

**Q9. "How many full time jobs have you had?"**

**Q10. "How many years have you worked for your current employer?"**

**Q11. "Of your remaining working career, approximately how many years do you intend to work for your current employer?"**

Answer \_\_\_\_\_ out of \_\_\_\_\_ (working yrs remaining)

X Not applicable

**Q12. "If an employee is planning on terminating employment, what do you think the company should do?" (circle all that apply)**

- 1 Wish the employee well and not intervene
- 2 Nothing, they are leaving because they want other opportunities
- 3 Nothing, the company should have acted earlier
- 4 Work through the employee's supervisor
- 5 Interview employee and determine reason for leaving
- 6 Meet with employee and attempt to retain employee
- 7 Other \_\_\_\_\_

Q13. "How would you answer the following question, on a scale of 1 to 9, where 1 is 'strongly disagree' and 9 is 'strongly agree'? I rank my employer as paying employees other than me appropriately."

Strongly Disagree									Strongly Agree	N/A
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	8	9		

Q14. "My employer's human resources practices are modern and progressive."

Q15. "My company is loyal to its employees."

Q16. "I am loyal to my company."

Q17. "I am paid appropriately."

Q18. "My employee benefits are appropriate."

Q19. "My employee pension plan is appropriate."

Q20. "My annual bonus is appropriate."

Q21. "The relationship between my work and pay is appropriate."

Q22. "At work I feel part of a team."

Q23. "The work group that I am part of has diversity."

Q24. "Within my work group I feel I belong."

Q25. "My workload is appropriate."

Q26. "My work level of challenge is appropriate."

Q27. "My work is appropriately meaningful."

Q28. "My work hours are appropriately flexible."

Q29. "My work environment is suitable."

**Q30. "My work provides appropriate opportunities for promotion."**

**Q31. "My work provides appropriate opportunities for training."**

**Q32. "I am treated better than others within my organization."**

**Q33. "My job is secure."**

**Q34. "The industry I work for is sustainable and will continue to provide jobs in the future."**

**Q35. "In my position at work I am able to influence decision making."**

**Q36. "In my position at work I have suitable control over my job assignments."**

**Q37. "In my position at work I have suitable communication with my supervisor."**

**Q38. "In my position at work I receive suitable recognition."**

**Q39. "In my position at work I have suitable influence over the company vision and direction."**

**Q40. "In my position at work I have support for career advancement from my supervisor."**

**Q41. "In my position at work I have a good relationship with my supervisor."**

**Q42. "I would want my son/daughter to work for the same company I do, one day."**

**Q43. "The following question is about stress in your life. On a scale of 1 to 9, how much stress would be there in your life, where 1 is not stressed at all and 9 is extremely stressed."**

**Q44. "The following is a list considered the top priorities for employee satisfaction. Rank the following list from your #1 to #5, or more, top employee satisfaction priorities. "**



Ranking : Factors which affect motivation and retention (in no order)

- \_\_\_ Challenge and/or meaningful work
- \_\_\_ Work hour flexibility
- \_\_\_ Work Environmental – Physical
- \_\_\_ Opportunity for advancement, promotion
- \_\_\_ Compensation, Wages and Salary
- \_\_\_ Benefits & Pension plan
- \_\_\_ Bonus (amounts and frequency)
- \_\_\_ Relationship between pay and performance
- \_\_\_ Work teams, relationship with colleagues, sense of belonging
- \_\_\_ Diversity of other employees
- \_\_\_ Workload
- \_\_\_ Supervisors support of career advancement
- \_\_\_ Overall relationship with supervisor
- \_\_\_ Job Security
- \_\_\_ Ability to influence (day-to-day)
- \_\_\_ Autonomy and Control over job assignments
- \_\_\_ Communication with supervisor and recognition
- \_\_\_ Company vision and clear direction
- \_\_\_ Other \_\_\_\_\_

**Q45. “When you think of reasons you would stay working at this employer, rank the following list from your #1 to #5, or more, top reason for staying “**

Ranking : Factors which affect motivation and retention (in no order)

- \_\_\_ Challenge and/or meaningful work
- \_\_\_ Work hour flexibility
- \_\_\_ Work Environmental – Physical
- \_\_\_ Opportunity for advancement, promotion
- \_\_\_ Compensation, Wages and Salary
- \_\_\_ Benefits & Pension plan
- \_\_\_ Bonus (amounts and frequency)
- \_\_\_ Relationship between pay and performance
- \_\_\_ Work teams, relationship with colleagues, sense of belonging
- \_\_\_ Diversity of other employees
- \_\_\_ Workload
- \_\_\_ Supervisors support of career advancement
- \_\_\_ Overall relationship with supervisor
- \_\_\_ Job Security
- \_\_\_ Ability to influence (day-to-day)
- \_\_\_ Autonomy and Control over job assignments
- \_\_\_ Communication with supervisor and recognition
- \_\_\_ Company vision and clear direction
- \_\_\_ Other \_\_\_\_\_

**Q46. "When you think of reasons coworkers have left, or want to leave this employer, rank the following list from your #1 to #5, or more, top reason for leaving "**

Ranking : Factors which affect motivation and retention (in no order)

- ☐ Challenge and/or meaningful work
- ☐ Work hour flexibility
- ☐ Work Environmental – Physical
- ☐ Opportunity for advancement, promotion
- ☐ Compensation, Wages and Salary
- ☐ Benefits & Pension plan
- ☐ Bonus (amounts and frequency)
- ☐ Relationship between pay and performance
- ☐ Work teams, relationship with colleagues, sense of belonging
- ☐ Diversity of other employees
- ☐ Workload
- ☐ Supervisors support of career advancement
- ☐ Overall relationship with supervisor
- ☐ Job Security
- ☐ Ability to influence (day-to-day)
- ☐ Autonomy and Control over job assignments
- ☐ Communication with supervisor and recognition
- ☐ Company vision and clear direction
- ☐ Other \_\_\_\_\_

**Q47. "I am comfortable with my company/plant's environmental impact." (1-9)**

**Q48. "Understanding that you may be a new or a long time employee, if you could roll time back to the time when you started working at your present job, where would you choose to work? Would you choose to start working for the same employer? Use the old economic conditions."**

- 1. Present Job
- 2 Other company same type of job
- 3 Same type of job but different industry
- Other \_\_\_\_\_ (specify)
- X Not applicable

**Q49. "I would recommend my job to others."**